

CANADA
DEPARTMENT OF MINES AND RESOURCES

MINES, FORESTS AND SCIENTIFIC SERVICES BRANCH

NATIONAL MUSEUM OF CANADA

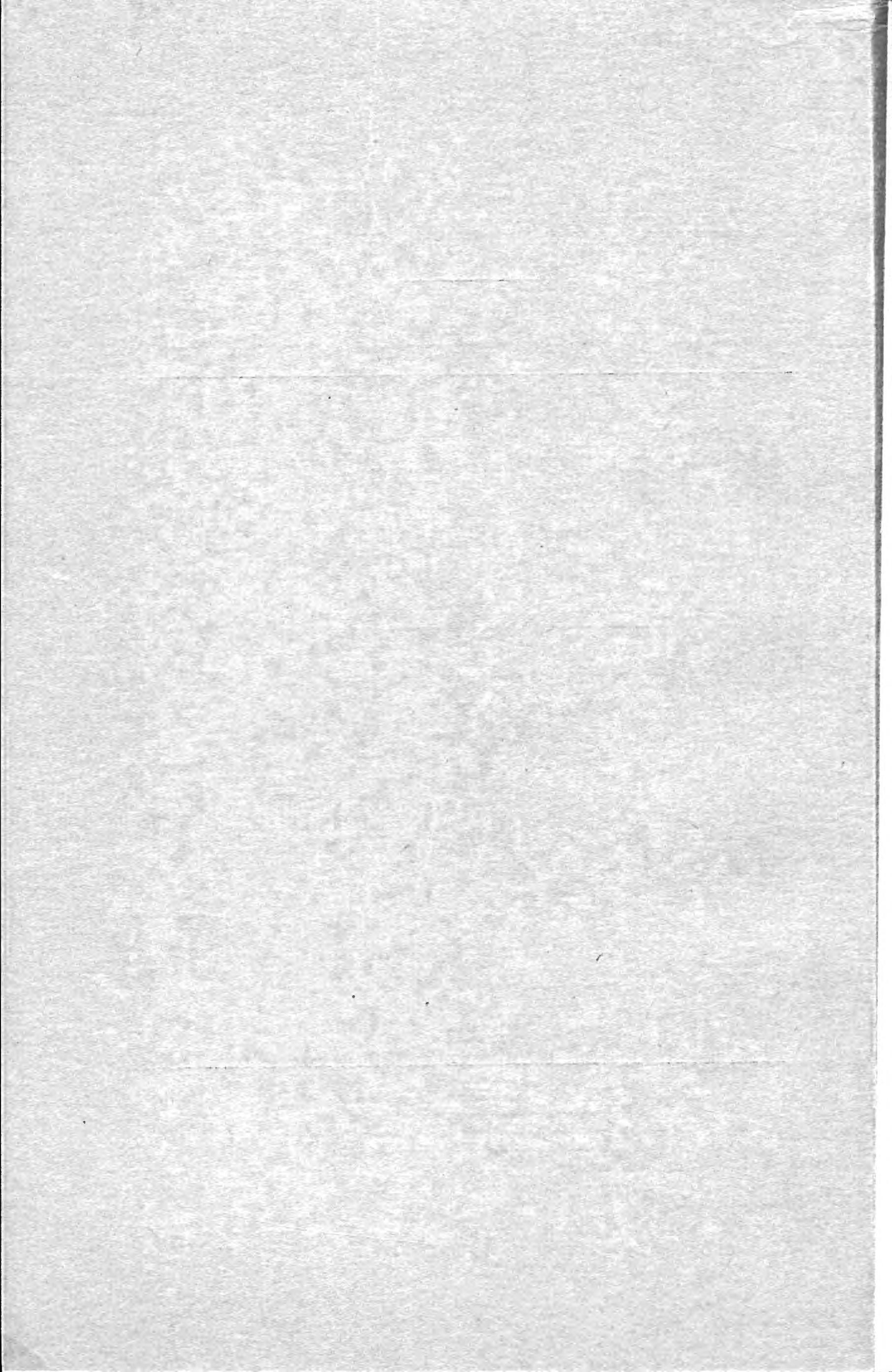
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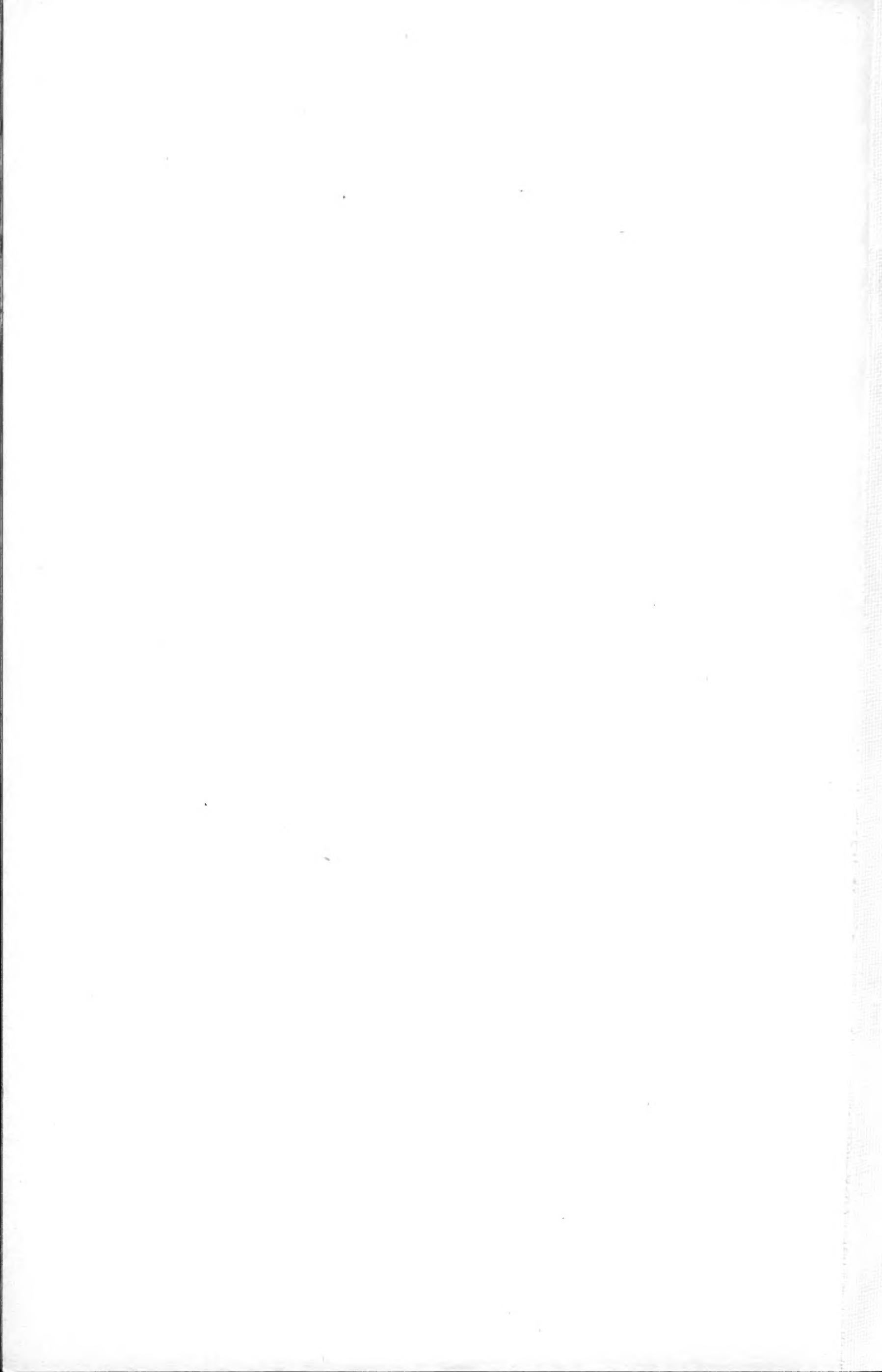
Annual Reports of the
National Museum
1939-1947



OTTAWA
EDMOND CLOUTIER, C.M.G., B.A., L.Ph.,
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
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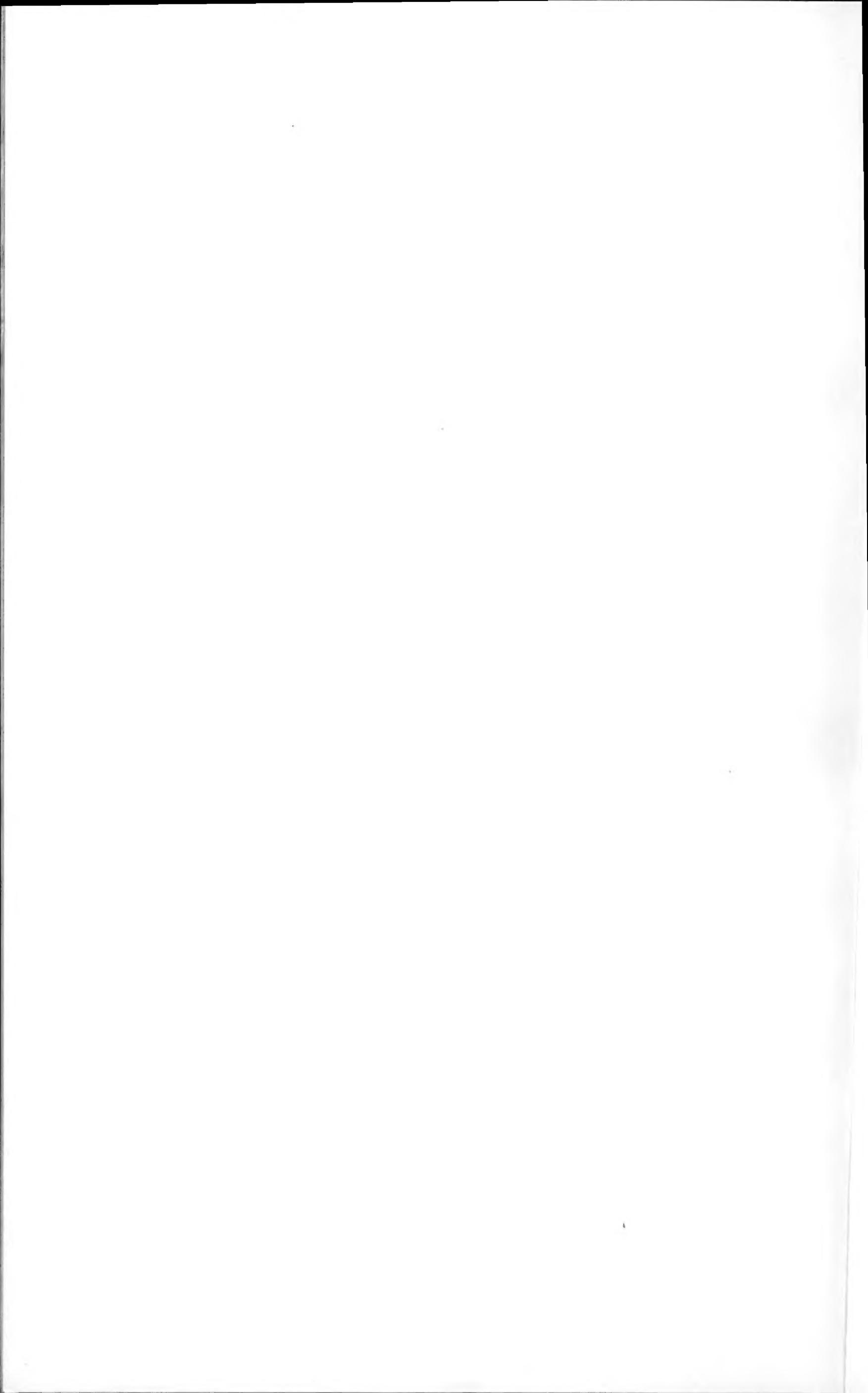
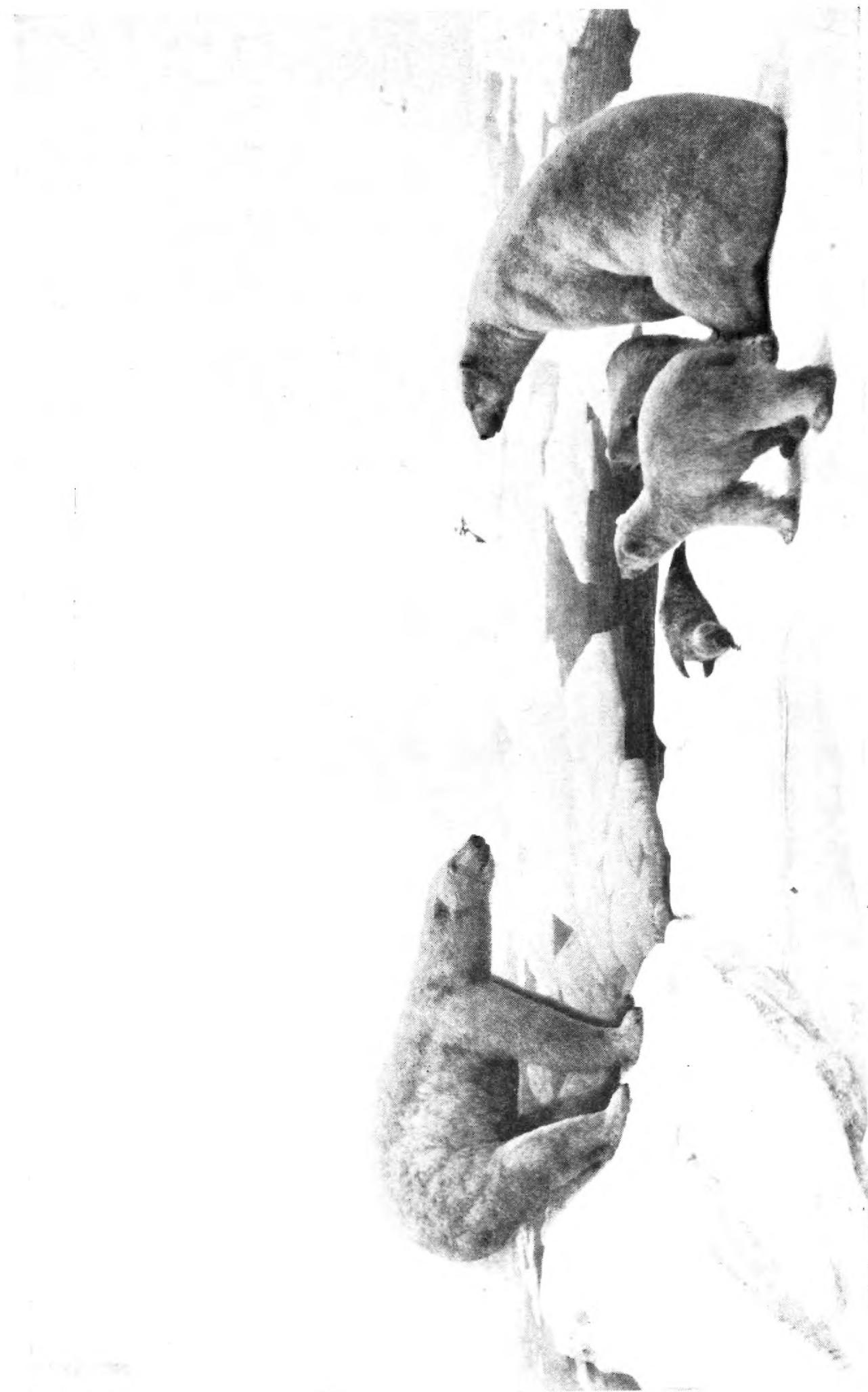






PLATE I



Polar Bear habitat group in the National Museum.

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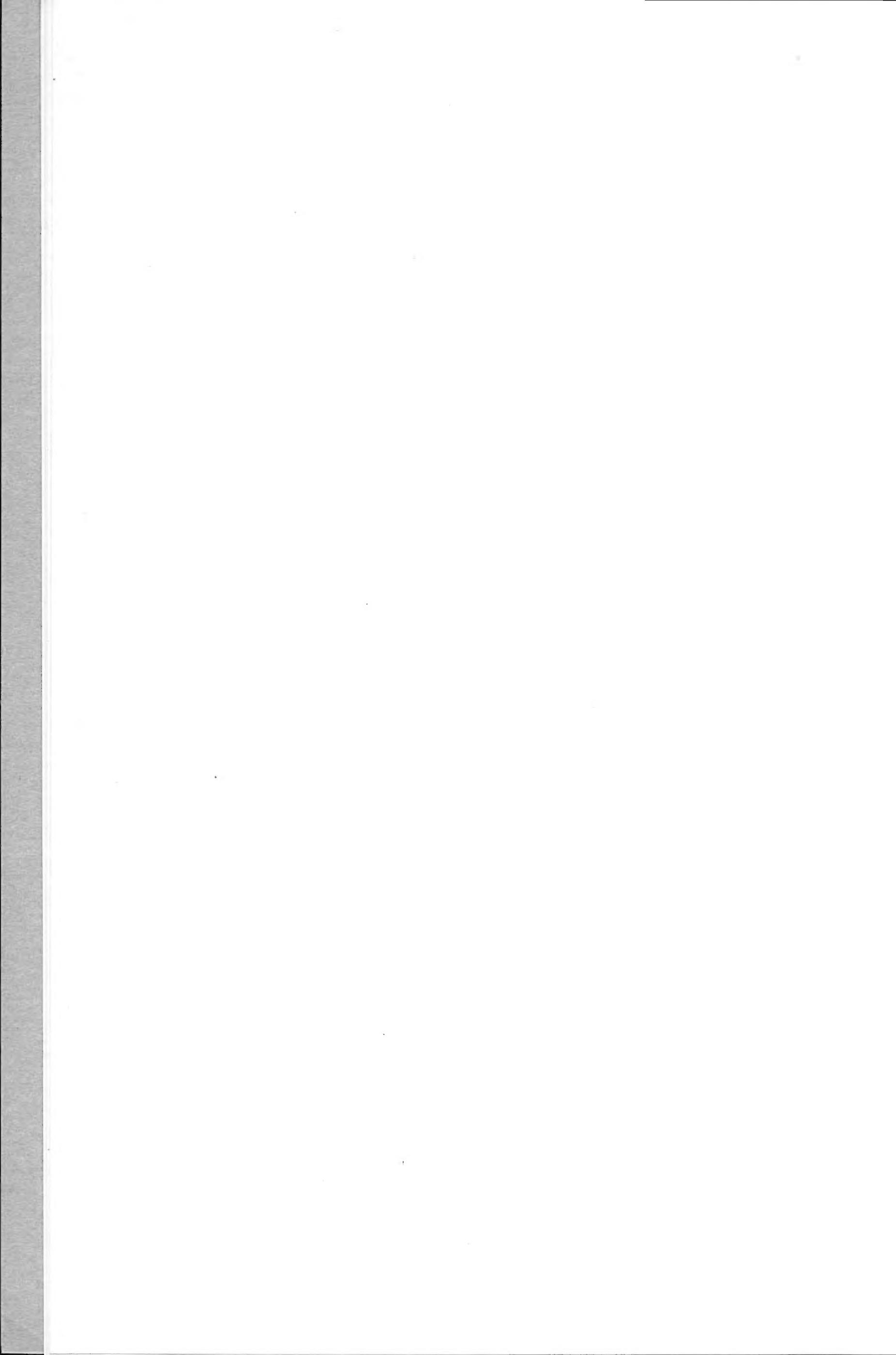


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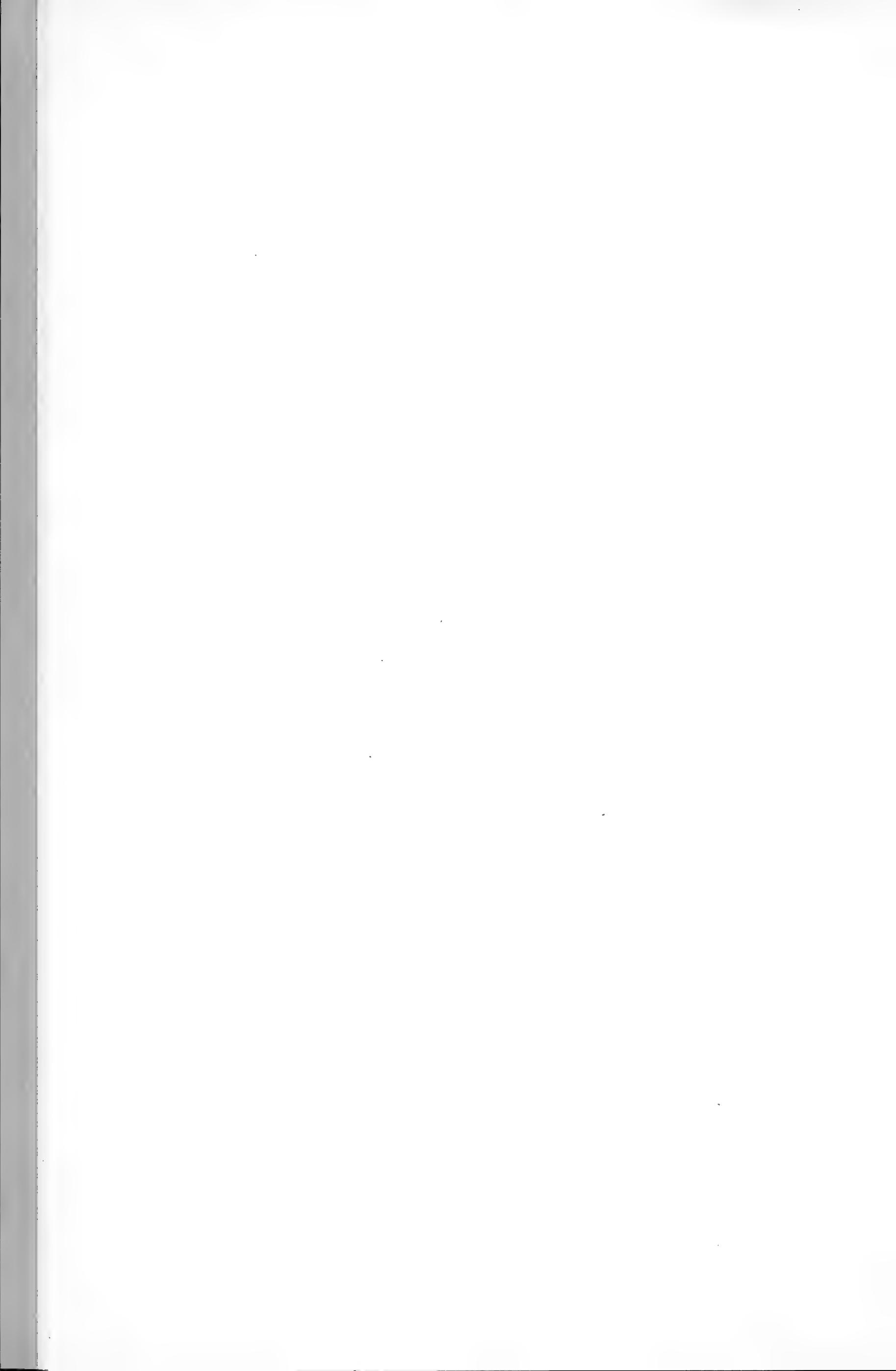


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PREFACE

The National Museum of Canada may be said to date from 1842 when William Edmund Logan founded the Geological Survey of Canada. The latter organization included the Museum until 1920, when the anthropological and biological work was separated from the Geological Survey and placed under a Director of the Victoria Memorial Museum. Until that year also reports on the Museum's activities were included in the annual Summary Reports of the Geological Survey.

In 1921 an annual administration report for the Department of Mines was instituted to take the place of the separate administrative reports of its two divisions, the Geological Survey and the Mines Branch, and until 1925 such reports contained the only annual accounts of the activities of the Museum and the Geological Survey. This arrangement had certain disadvantages. These reports combined a business part, intended primarily for the information of the Government, with accounts of matters of scientific interest. The latter were not treated in as extensive a manner as scientists in other institutions desired, and in addition the material often failed to reach the attention of such students. In 1926, therefore, a separate Annual Report for the National Museum of Canada was issued, which summarized the general activities of the Museum and served as a means of publishing statements and short papers on Museum subjects. Such Annual Reports were issued up to and including the fiscal year 1938-39 when, owing to wartime conditions, the policy was discontinued. Since then the only periodical statement about the National Museum has been in the Annual Report of the Mines and Geology Branch of the Department of Mines and Resources.

With an increase in interest in the work of the National Museum and an expansion of its activities, the practice of issuing separate Annual Reports has been revived. The present volume bridges the gap from 1939 to 1947. It summarizes the information about the Museum that appeared in the annual reports of the Mines and Geology Branch for those years and, in addition, contains much other material of interest to other museums and to scientists specializing in similar fields. The volume will be of particular value to libraries in that it will make the succession of National Museum Annual Reports complete.

The period covered by the present volume was one of retrenchment in Museum activities. The need for office space in the Victoria Memorial

Museum building to house the Topographical Survey on the fourth floor necessitated the closing of the large exhibition halls on the second floor in order to provide accommodation for the offices and study collections of the Biological Division. This left only one hall, that of Vertebrate Palaeontology on the ground floor, available to the public.

The period was also one of decreased activity owing to loans and losses of personnel. A. E. Porsild, on loan to the Department of External Affairs as Acting Consul to Greenland, was away from the Museum for much of the period 1940-43. The services of D. Jenness and C. M. Barbeau were afforded to the Dependents' Allowance Board from February 1940 to January 1941. On June 13, 1941, Dr. Jenness was lent to the Royal Canadian Air Force to assume the duties of Deputy Director of Intelligence, and he continued this work for the rest of the period. W. J. Wintemberg retired from the Museum staff on January 1, 1941, P. A. Taverner in June 1942, and R. M. Anderson on December 30, 1945. Wyatt Malcolm, who had served as assistant curator since 1936, retired in 1941, and F. C. C. Lynch, who had been in charge of the Museum since 1936, was superannuated in 1946.

Late in 1946 the Topographical Survey was moved from the National Museum to other quarters, and early in 1947 the Biological Division and the National Herbarium were transferred to the fourth floor, freeing the large halls on the second floor once more for exhibition purposes, and in the spring of 1947 these were opened to the public.

In February 1947 F. J. Alcock was appointed Acting Curator of the Museum and in September, Curator.

F. J. ALCOCK,

Curator, National Museum of Canada

NATIONAL MUSEUM OF CANADA ANNUAL REPORT 1939-40

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ANTHROPOLOGICAL DIVISION

Field Work

Three members of the staff were in the field during 1939.

Marius Barbeau spent 4 months during the summer on the coast of British Columbia and southern Alaska, investigating the social organization of some Tsimshian tribes and the arts and crafts of the Haida and Tlinkit Indians, particularly their silver-work and slate carvings. Later in the year he visited museums in New York and New Haven to study some collections of Indian silver-work and slate carvings. He also made three trips to Quebec and St. Lin in connection with the furnishing and decorating of Laurier Memorial House, now maintained by the National Parks Bureau at St. Lin.

W. J. Wintemberg, at the request of the Saguenay Historical Society, investigated a supposed Indian cemetery near Desbiens, Quebec, but the only human remains he discovered were those of a white individual. Returning to Tadoussac, he mapped a small area that he had explored for archaeological remains in 1927. From Tadoussac he proceeded to Dunnville, Haldimand county, Ontario, where he excavated an Algonkian Indian camp site, recovering a considerable quantity of pottery, in addition to objects of bone and stone.

Douglas Leechman spent June and July in the eastern United States, studying museum methods, with the assistance of a grant made to him by the Carnegie Corporation of New York. He visited about sixty museums

and art galleries in most of which he noted answers to a detailed questionnaire, thereby accumulating a mass of data showing the present-day practice in many of the most important museums of North America.

From August 21 to October 21, Mr. Leechman was in the field collecting specimens from the Cree and Chipewyan, who were not well represented in the National Museum study collections. He visited Indian reservations situated between Prince Albert and Edmonton, and between Edmonton and Morley, as well as in the vicinity of Qu'Appelle, gathering in all some 400 ethnological specimens.

In the course of this field work, Mr. Leechman also collected a number of archaeological specimens, including one series of a very primitive type, and another from a more modern site of a culture not yet identified.

Office Work

D. Jenness, Chief of the Division, completed during the early part of the year an extensive report on the religious beliefs of a Coast Salish Indian group near the mouth of Fraser River. He then prepared a paper on a vocabulary of the extinct Beothuk Indians of Newfoundland that some unknown benefactor had presented to the museum, and completed the manuscript part of Volume 16, Report of the Canadian Arctic Expedition, "Material Culture of the Copper Eskimos". In the autumn, when Mr. Graham Rowley brought out from the Arctic a collection of Eskimo archaeological material from Foxe Basin, Mr. Jenness studied it with him and helped him to prepare a preliminary paper on the significance of his discoveries. Mr. Rowley has now gone overseas, leaving his collection in charge of the National Museum until the close of the war, when the Museum will ship it to Cambridge. During the winter, also, Mr. Jenness assisted Mr. George Quimby, of Louisiana State University, in the preparation of a report on a collection of Eskimo archaeological objects recovered by the latter from the Belcher Islands, Hudson Bay, a collection that has since been divided between the National Museum of Canada and the Field Museum of Chicago. In the last 2 months of the fiscal year he began the preparation of a report on the Saanich Indians of Vancouver Island.

Mr. Jenness attended three conferences during the year. In August, on behalf of the Indian Affairs Branch, he took part in a Seminar Conference in the University of Toronto on the North American Indians of today. During Christmas week he attended the meeting of the American Association for the Advancement of Science in Columbus, Ohio, to fulfil his duties as retiring Vice-President of Section H, then proceeded to the annual meeting of the American Anthropological Association in Chicago. At this latter meeting he delivered both the presidential address and an address on Eskimo chronology.

Administrative duties and correspondence continued to be fairly heavy, and much time was occupied in attending to the needs of visiting

anthropologists who came to study manuscript and other material in the Division. There were two visitors from the United States, Dr. de Laguna, professor of anthropology at Bryn Mawr, Pa., and Dr. W. Fenton, of the Bureau of American Ethnology, Washington; one from England, Miss Beatrice Blackwood, of the Pitt-Rivers Museum, Oxford; and two from Australia, Dr. Thompson, who was travelling on a Rockefeller scholarship, and Dr. Grenfell Price, of the University of Adelaide; and Mr. John F. Davidson, on the staff of Upper Canada College, Toronto.

In the early part of the year Mr. Barbeau completed a monograph, in English, on Early Canadian Silver, but his investigations on the Pacific coast during the summer yielded new information that necessitates a revision of one chapter in this monograph. He is preparing a larger monograph, in French, on the old silver of French Canada, and gathering material for still a third monograph, on maple sugar. With the aid of several collaborators, he has added a considerable number of French-Canadian folk-songs and folk-tales to the large collection he has already amassed, and he has prepared a manuscript on the same subject for publication by the *Journal of American Folk-Lore*. For M. Luc Lacourcière, a Royal Society scholar, he compiled from his manuscripts and transcribed from his shorthand notes several hundred versions of French-Canadian folk-songs, which Mr. Lacourcière is to study and edit. Mr. Barbeau also delivered a considerable number of lectures during the year, published a number of papers on various subjects in different magazines and journals, and supplied information to various organizations, among them the International Joint Commission, the Canadian Geographical Society, and the National Film Board.

Before the field season opened, Mr. Wintemberg sorted out the archæological specimens from three sites in eastern Canada that he had excavated in earlier years and described in museum reports. He set aside the most important specimens so that they might be retained in the National Museum; the rest he divided into ten lots, which were subsequently distributed to various museums in Canada and the United States that requested the material. These museums included the Royal Ontario Museum of Archæology in Toronto, the Smithsonian Institution in Washington, the American Museum of Natural History in New York, and seven others. One collection was sent to the Pitt-Rivers Museum in Oxford.

Since his return from the field Mr. Wintemberg has spent most of his time in studying the archæological material from the Middleport Village site, Brant county, Ontario, which he excavated in 1930. He will prepare a report on this site during the coming fiscal year.

Exhibition Work

Douglas Leechman, with the assistance of W. G. Roberts, continued the reorganization of the exhibits and brought the west hall almost to completion. He installed two life-sized figures that had been modelled by the

Toronto sculptor, Miss Frances Loring, one representing an Indian trapper, the other an Eskimo hunter watching over the breathing-hole of a seal. He installed, also, a new, experimental case built by the mechanical staff from the plans and specifications of Mr. Jenness and Mr. P. A. Taverner. It is more attractive than the cases hitherto used, more modern in design and lighting; and it can be constructed at about one-fifth the cost.

In his laboratory Mr. Leechman has introduced the new method of making moulds and casts in latex. Much of his and Mr. Roberts' time has been taken up, as always, with the cataloguing, cleaning, and repairing of specimens. Every addition to the museum's collections intensifies the difficulties created by the very inadequate facilities for storage.

Publications

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Native Art of the North Pacific Coast. By Marius Barbeau. *The Vancouver School of Art*, Oct. 21, 1939.

Backgrounds of Canadian Art. By Marius Barbeau. *Con Tempo Club of Ottawa*, Jan. 12, 1940.

Art in French Canada. By Marius Barbeau. *Queen's University, Kingston*, Jan. 29, 1940.

Maple Sugar—Its Past. By Marius Barbeau. *National Museum of Canada*, Feb. 24 and 28, 1940.

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Canada's Indian Problems. By D. Jenness. *American Association for the Advancement of Science, Columbus, Ohio*, Dec. 27, 1939.

Prehistoric Culture Waves from Asia to America. By D. Jenness. *American Anthropological Association, Chicago, Ill.*, Dec. 29, 1939.

Canadian Indian Religion. By D. Jenness. *Ottawa Field-Naturalists' Club, Ottawa*, March 21, 1940.

Accessions

Altogether, 1,403 specimens were added to the collections and catalogued during the year. They are divided as follows:

Ethnology	398
Osteology	23
Archæology	982

These figures do not include several hundred archæological specimens from Arctic Canada that have not yet been entered in the catalogues.

BY DONATION

Dr. Hugh S. Bostock:
Two chipped stone implements, Australia Creek, Yukon.

A. Percy Brooks:
Chipped stone knife, New Westminster, B.C.

Dr. G. B. Brown:
Two Indian crania, British Columbia.

Dr. W. A. Clemens:
Sandstone figure, Nanaimo, B.C.

M. C. Christianson:
Stone pipe and stem, Blackfoot.

Sgt. Gilmour, R.C.A.F.:
Two snowshoes, Dog-rib Indian.

Dr. E. F. Greenman:
Collection of glass beads from Indian graves, Wardrop Island, Ont.

Mrs. Norman Lathlin:
Fragment of Indian pottery, The Pas, Man.

Corp. D. Martin, R.C.M.P.:
Two archæological specimens, Mackenzie Delta.

D. A. Nichols:
Collection of archæological material from the Eastern Arctic.

Dr. L. J. O'Brien:
Carved granite pestle, Grand Prairie, Alta.

A. E. Porsild:
Nineteen Eskimo crania, Mackenzie Delta. Snow shovel and drum rim, Mackenzie Delta.

Geo. I. Quimby:
Archæological collection, Belcher Islands, Hudson Bay.

Miss F. B. Richards:
Prairie Indian beadwork, collected about 1910.

Graham Rowley:
Archæological collection, Foxe Basin, N.W.T.

Royal Canadian Mounted Police:
Indian skeletal material and grave objects, Howard, Sask.

Dr. F. A. Speck:
Archæological material from Battle Island, Labrador.

Thomas Stewart:
Archæological material, Carleton county, Ont.
Archæological material, Queens county, P.E.I.

Lincoln Washburn:
Collection of Eskimo material, Victoria Island, N.W.T.

Dr. R. T. D. Wickenden:
Archæological collection from Dauphin, Manitoba.

Mr. Willsford:
Two stone gouges, Pickanock River, Que.

FROM THE STAFF:

C. M. Barbeau:
Skeletal material from Prince Rupert, B.C.

Douglas Leechman:
Ethnological and archæological material from Alberta and Saskatchewan.

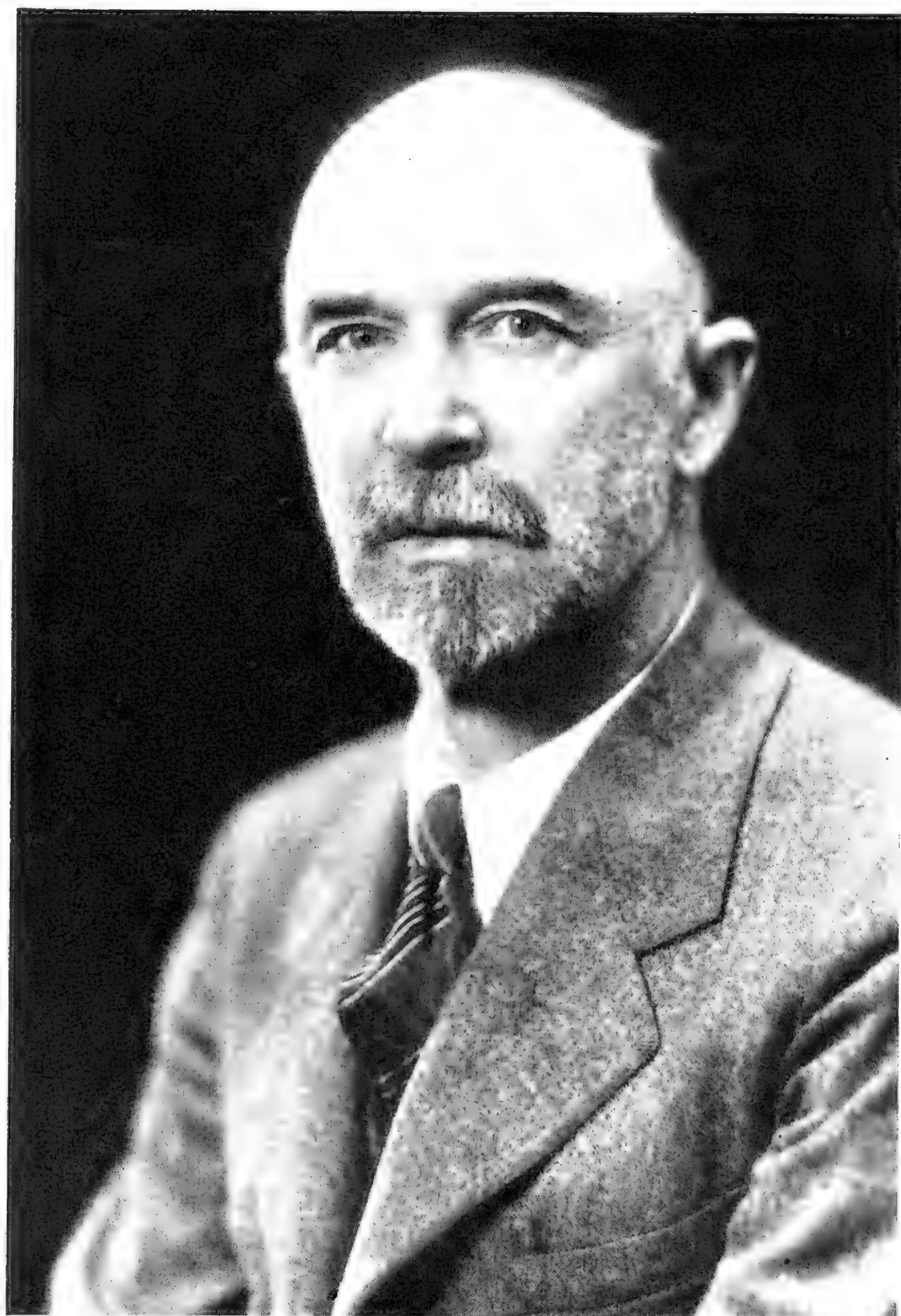
W. J. Wintemberg:
Archæological material from Brant and Essex counties, Ont.

BY PURCHASE

Ceinture fléchée from Montreal, collected by Mme LeBel.
Naskapi Indian decorated coat, collected by F. E. Wright.

BY EXCHANGE

Child's mantle, Blackfoot, collected in 1840.
Bone club, Nootka, British Columbia, collected about 1890.
Bone beaming tool, Cree, Traverse Bay, Lake Winnipeg.
Collection of archæological material, Hudson Strait.



99477

Harlan I. Smith

**BIBLIOGRAPHY OF HARLAN I. SMITH
1889-1936**

Harlan Ingersoll Smith joined the staff of the National Museum of Canada in 1911 and retired in 1936. During those years he laid firm the foundations of the science of archæology in Canada; first by actual work in the field; and secondly by the establishment of the Archæological File, which, ideally, contains all that is known of the archæology of Canada.

The following bibliography of his published work, though large, is almost certainly incomplete, especially in newspaper articles and material contributed to small magazines. Little of archæological importance has been left out.

Douglas Leechman

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A Prehistoric Petroglyph on Noeich River, B.C.; Man 25:136-138, No. 9, Sept. 1925.

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Sympathetic Magic and Witchcraft among the Bella Coola; Am. Anthropol. 27:116-21, Jan. 1925.

Totem Poles; Am. Anthropol. 27:579, Oct. 1925.

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Materia Medica of the Bella Coola and Neighbouring Tribes of British Columbia; in Nat. Mus., Canada, Ann. Rept. 1927, pp. 47-68, Ottawa, 1929.

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BIOLOGICAL DIVISION

R. M. Anderson, Chief of the Division, continued research on the taxonomy, distribution, and economic status of Canadian mammal species. Biological investigations were made by him in the National Parks of western Canada from July 27 to October 3. The mammal collection, specifically identified and catalogued, numbered 16,943 specimens on March 31, 1940.

Clyde L. Patch began the construction of a habitat group of polar bears. He supervised the loan collections and 387 birds and mammals were lent to educational institutions. Work was done on the collection of amphibians and reptiles, which now totals 4,924 catalogued specimens.

Claude E. Johnson, in addition to other art work, began a mural background for the polar bear habitat group. He also did a considerable amount of routine work on the collections.

D. J. Blakely and J. E. Perron prepared biological material for the study collections.

Hamilton M. Laing made field collections in the Bella Coola region, British Columbia, from June 11 to September 28, 1939, during which time 239 mammals, 72 birds, and a number of amphibians and reptiles, as well as a valuable collection of plants, were obtained.

W. Earl Godfrey, of Wolfville, Nova Scotia, made field collections in western New Brunswick, from July 7 to September 23. He collected 295 mammals, 4 birds, 19 amphibians, and 9 reptiles, all from an area that hitherto had been almost entirely unrepresented in the Museum collections.

Publications

Mammifères de la Province de Québec. By R. M. Anderson. Rapport Annuel de La Société Provancher d'Histoire Naturelle du Canada, Québec, 1939. Issued February 29, 1940, pp. 37-111, 1 map. (This is a revised and augmented edition in the French language of a paper on "Mammals of the Province of Quebec," published in the Anniversary Report of the Society for 1939, issued February 28, 1939.)

Northern Records of the Wood-frog. By Clyde L. Patch. Copeia, 1940, No. 4, Dec. 26, 1939.

Accessions to Museum

MAMMALS

By Gift:

Mrs. Richard Manske, Rockcliffe Park, Ottawa: 1 meadow mouse, *Microtus pennsylvanicus*, in the flesh.

Institute of Parasitology, McGill University, Macdonald College, Que.: 2 fisher, *Martes pennanti*, and 1 marten, *Martes americana*, skinned carcasses for skeletonizing.

Bruce S. Wright, Dominion Forest Service, Ottawa: 1 woodchuck, *Marmota monax*, from Fredericton, N.B.

John J. Miller, Schreiber, Ont.: 1 long-tailed shrew, *Sorex cinereus*, 1 short-tailed shrew, *Blarina brevicauda*; 1 red squirrel, *Tamiasciurus hudsonicus*; 2 white-footed mice, *Peromyscus maniculatus*; 1 rock vole, *Microtus chrotorrhinus*; 1 meadow jumping mouse, *Zapus hudsonius*.

George P. Holland, Entomological Laboratory, Department of Agriculture, Kamloops, B.C.: 3 British Columbia woodchucks, *Marmota monax petrensis*, from near Revelstoke, B.C.

National Parks Bureau, Department of Mines and Resources, Ottawa: 36 small mammals, skins and skulls in formalin, from Banff National Park, Alberta, collected by Dr. C. H. D. Clarke; 1 grizzly bear, old skin, from Banff region; 2 skulls of timber wolf, *Canis lupus*, from Prince Albert National Park, Saskatchewan.

O. A. Desabries, Eastview, Ont.: 1 star-nosed mole, *Condylura cristata*, in the flesh.

Paul H. Parizeau, Vancouver, B.C.: 4 Richardson ground squirrels, *Citellus richardsonii*, from Virden, Manitoba.

Harry Snyder, Montreal: 2 white sheep, *Ovis dalli*, skins with skulls, from Mackenzie district, N.W.T.

Dennis H. Chitty, St. Catharines, Ont.: 3 brown lemmings, *Lemmus trimucronatus*, from Chesterfield Inlet, Hudson Bay, N.W.T. Taken on Canadian Arctic Expedition, 1939.

Kenneth Racey, Vancouver, B.C.: 1 mountain beaver, *Aplodontia rufa*, from Chilliwack Valley, B.C.

G. R. Sonley, Dominion Forest Service, Ottawa: 14 small mammals, mice and shrews, from Ontario and Quebec.

Dr. Seymour Hadwen, Ontario Research Foundation, Toronto: 1 Barren Ground bear, *Ursus* sp., juvenile, skin and skull, taken by herder in reindeer reserve, Richards Island, Mackenzie Delta, N.W.T.

R. E. Balch, Entomologist in Charge, Dominion Entomological Laboratory, Department of Agriculture, Fredericton, N.B.: 9 small mammals for determination in connection with ecological investigations—5 long-tailed shrews, *Sorex cinereus*; 1 pigmy shrew, *Microsorex hoyi thompsoni*; 1 red-backed mouse, *Clethrionomys gapperi ochraceus*; 2 white-footed mice, *Peromyscus maniculatus*.

Keith Reynolds, London, Ont.: 2 long-eared brown bats, *Myotis keenii septentrionalis*, hibernating in caves near Wiarton, Bruce county, Ontario.

Richard Sutton, Winnipeg, Man.: 19 small mammals, skins and skulls—2 long-tailed shrews, *Sorex cinereus*; 1 saddle-backed shrew, *Sorex arcticus*; 1 pigmy shrew, *Microsorex hoyi intervectus*; 3 short-tailed shrews, *Blarina brevicauda*; 4 Drummond meadow mice, *Microtus pennsylvanicus drummondi*; 7 Plains red-backed mice, *Clethrionomys gapperi loringi*; 1 lemming mouse, *Synaptomys borealis borealis*; all from Wasagaming, Riding Mountain National Park, Manitoba.

William Anderson, McKellar townsite, Carleton county, Ont.: 1 male Bonaparte weasel, *Mustela cicognanii*, in the flesh.

Carnegie Museum, Pittsburgh, Pa., U.S.A.: 1 female polar bear, skin and skull, collected by museum expedition, August 13, 1936, on Bare Island, James Bay, N.W.T.

W. E. Saunders, London, Ont.: 1 white-footed mouse, *Peromyscus leucocephalus*, from Santa Rosa Island, Florida, U.S.A.

By Museum Expedition:

W. Earl Godfrey, Wolfville, N.S.: 292 mammals, skins, skulls, skeletons, and preserved in formalin, from western New Brunswick (counties of Charlotte, Madawaska, and Victoria).

Hamilton M. Laing, and Charles J. Guiguet, British Columbia: 339 mammals, from Bella Coola region (King Island, Dean Inlet, Hot Springs, Kimsquit, and Rainbow Mountains).

R. M. Anderson, staff: 27 mammals from Jasper National Park, Alberta (Snake Indian River, Smoky River, Jacques Lake, Rocky River, Brazeau River, and Mount Robson, B.C.).

By Purchase:

George Magrum, Resolution, Mackenzie district, N.W.T.: 1 skin and skull of Barren Ground bear, *Ursus richardsoni*, taken near Aylmer Lake, Mackenzie district, N.W.T., August 9, 1935.

AMPHIBIANS AND REPTILES*By Museum Expedition and by Gift:*

R. M. Anderson, Alta.	3
Mark Brooks, Aylmer, Que.	1
Dr. C. H. D. Clarke, Alta.	1
Audrey Garland, Pink Lake, Que.	1
W. Earl Godfrey, N.B.	28
Charles J. Guiguet, B.C.	3
H. F. Hughes, Shaunavon, Sask.	1
Claude E. Johnson, Ottawa, Ont.	2
Hamilton M. Laing, B.C.	2
George LeTemplier, Clova, Que.	2
Paul H. Parizeau, Virden, Man.	6
G. A. Toner, Howard Lake, Ont.	1
Bruce S. Wright, N.B.	18
Total	69

ORNITHOLOGICAL DIVISION

No field program was undertaken during the year. P. A. Taverner, Chief Ornithologist, concentrated his research on Manitoba birds. These were critically studied and correlated with previous information, with some interesting results.

*By P. A. Taverner:***Publications**

- The Role of the Predator; Canadian Field-Nat., vol. 53, pp. 88-90 (1939).
- Predators—Human and Wild; Bird Lore 42, pp. 4-9 (1940).
- The Red-winged Blackbirds of the Canadian Prairie Provinces; The Condor, 41, pp. 244-246 (1939).
- Canadian Water Birds, Game Birds, Birds of Prey.
- Canadian Land Birds.
- Two "Pocket Field Guides", Musson Book Co., Toronto, and David McKay Co., Philadelphia, pp. 1-291, and pp. 1-277 (1939).
- Fieldfare, an addition to the American list, and some Arctic notes—General Notes; The Auk, vol. 57, p. 119 (1940).
- Three Book Reviews.

Accessions to Museum**BIRDS***By Gift and Museum Expedition:*

- G. H. Hammond, Entomological Branch: One Florida gallinule, in the flesh.
- H. S. Russell, Ottawa, Ont.: One Virginia rail, in the flesh.
- Edward Larson, 323 Laurier ave., Ottawa, Ont.: One yellow-bellied sapsucker, in the flesh.
- A. D. Henderson, Belvedere, Alta.: One Arctic tern—fragment of skin without head.
- Alexander Anderson, Whale Head, Saguenay co., Que.: One great blue heron—salted skin.
- A. L. Wilk, Camrose, Alta.: One coot, one yellow-bellied flycatcher, one chipping sparrow.
- Dr. R. M. Anderson: Nine birds.

Royal Canadian Mounted Police, Kenora, Ont.: One whistling swan—rough skin.

P. A. Taverner, Ottawa, Ont.: One red-shafted flicker, one yellow warbler, one wren-tit.

Graham Rowley, England: One yellow-billed loon (skull, bill, and fragmentary skin), one fieldfare (rough skin).

R. Finnie, Carp, Ont.: One redpoll in flesh, one junco.

J. S. Jenkins, Special Constable, R.C.M.P., Charlottetown, P.E.I.: 3 ring-necked ducks, in the flesh.

R. Sutton, Winnipeg, Man.: One Nashville warbler, one Connecticut warbler.

R. DeLury, Dominion Observatory, Ottawa, Ont.: One brown creeper, in the flesh.

Royal Canadian Mounted Police: One wood duck, in flesh.

R. W. Tufts, Wolfville, N.S.: Two wings of ring-necked duck.

D. Blakely and C. Johnson, Museum staff: 18 birds.

Kenneth Racey, Vancouver, B.C.: One American goshawk—fresh skin.

Royal Ontario Museum of Zoology, Toronto, Ont.: One great horned owl—made up skin.

Emile Landry, Natashquan, Que.: One ivory gull, in the flesh.

F. W. Osbourne, Harrington Harbor, Saguenay co., Que.: One ivory gull—rough mount.

Mr. "Dud" Mason, Prescott, Ont.: One least bittern.

Dr. C. H. D. Clarke, National Parks Bureau, Ottawa, Ont.: 6 birds.

W. Earl Godfrey, Wolfville, N.S.: 4 birds.

H. M. Laing, British Columbia: 52 birds.

NATIONAL HERBARIUM

A. E. Porsild continued his researches in connection with the preparation of flora of western arctic and subarctic Canada. The rearranging and indexing of the Canadian collection was continued, in the course of which a number of families and genera were revised. The National Herbarium is rich in so-called "type specimens". A type is the original plant specimen on which the first description of a species was based. If, later, the validity of a species is questioned, the monographer must refer to the original type. Unfortunately, few if any of the early type specimens were properly marked and none was heretofore catalogued or indexed in the National Herbarium. A search for type specimens in the National Herbarium was commenced and several hundred such types were indexed following a careful check against original descriptions. Labelling and mounting of plants for insertion in the herbarium increased the number of specimens in the National Herbarium to 155,628.

Professor T. M. C. Taylor, Department of Botany, University of Toronto, assisted by Dr. M. W. Bannan and Mr. H. M. Harrison, continued the study of the flora of the north shore of Lake Superior, which was begun in 1935. The party spent about 11 weeks in the field, where activities were centred at Peninsula, Thunder Bay district. It is estimated that about 2,500 collections were made, mostly in quadruplicate, comprising perhaps 700 species.

By A. E. Porsild:

Publications

Contributions to the Flora of Alaska; *Rhodora*, vol. 41, pp. 141-183 (1939).
 Contributions to the Flora of Alaska; *ibid.*, vol. 41, pp. 199-254 (1939).
 Contributions to the Flora of Alaska; *ibid.*, vol. 41, pp. 262-301 (1939).
Nymphaea tetragona in Canada; *Canadian Field-Nat.*, Ottawa, vol. 53, pp. 48-50 (1939).

Lectures

By A. E. Porsild:

Eighteen Years in the Arctic; Province of Quebec Society for the Protection of Birds, Montreal, Que., Jan. 8, 1940.

Flora of the Northwest Territories; McGill University, Montreal, Que., Jan. 8, 1940.

Flora of the Northwest Territories; Université de Montréal, Que., Jan. 9, 1940.

Accessions

<i>Plants received on account of exchange.....</i>	<i>3,587</i>
University of Alberta, Edmonton	15
A. J. Breitung, McKague, Sask.	500
J. F. Brenckle, Mellette, South Dakota	27
University of California, Berkeley	120
I. Clokey, South Pasadena, California	318
Gray Herbarium, Harvard University, Cambridge	100
Hungarian National Museum, Budapest	234
Botanical Museum, Lund, Sweden	1,194
Utah State Agricultural College, Logan, Utah	814
University of Saskatchewan, Saskatoon	7
U.S. National Herbarium, Washington, D.C.	223
Provincial Museum, Victoria, B.C.	35
 <i>Plants received as donations</i>	 <i>1,205</i>
Dr. C. Heimburger, Dominion Forest Service, Ottawa	247
W. G. Dore, Dalhousie University, Halifax, N.S.	61
A. E. Porsild, National Museum, Ottawa	636
Dr. H. M. A. Rice, Mines and Resources, Ottawa	33
Dr. J. F. Henderson, Mines and Resources, Ottawa	30
Dr. H. S. Bostock, Mines and Resources, Ottawa	114
C. W. Larson, Hudson's Bay Company, N.W.T.	52
Dr. R. M. Anderson, National Museum, Ottawa	147
Hamilton M. Laing, Comox, British Columbia	165
Prof. R. C. Hosie collection from Lake Superior, 1937	5,500
Miscellaneous	35
Photographs of types, etc.	67
 Total number of accessions to National Herbarium	 15,466

EDUCATIONAL WORK

Educational work is one of the most important activities of the National Museum, and each year greater demands are made on the Museum staff.

VISITORS AND SCHOOL VISITS

The various exhibits were seen by 92,303 people during the year. This is exclusive of thousands of junior and senior pupils who, accompanied by their teachers, came in organized groups. Among these were senior and adult groups from Middlesex county, Macdonald College, Simcoe county, Beachburg, and Lexington, Kentucky.

The Ottawa Public School Board continued its weekly classes in natural history in conjunction with the Museum, which were attended by 6,045 school children. Exhibits large enough to be seen by a whole class were selected. The subjects chosen for the 6-week cycles were: the Buffalo, the Musk-ox, Dinosaurs, Long-winged Swimmers and Full-webbed

Swimmers, Sieve-billed Swimmers, Deep Water Waders, and Shore Birds. The pupils, prepared in the classroom for the lesson, are divided into two groups of from forty to sixty. One group, in the lecture hall, sees a film, or slides, or both, together with specimens relative to the lesson. Discussion of the subject is carried on, led by a teacher or one of the pupils. The second group, in the exhibition hall, under the direction of a school instructor in natural science, studies the exhibit. The pupils' attention is directed to its outstanding or characteristic features, and they are asked to draw their own conclusions. Frequently a lesson consists of questions from the pupils and answers by the teacher. The two groups then exchange places, the whole lesson occupying approximately an hour. The teachers receive in advance from the Museum staff any help they may require in preparing the subjects to be taught.

LECTURE HALL

There were 118 reservations of the lecture hall by scientific or educational organizations, at whose meetings there was a total attendance of 18,426 persons. Lantern slides and motion pictures were shown on most occasions.

LECTURES AND MOTION PICTURE PROGRAMS

Two series of lectures on geology, agriculture, art, industry, mining, photography, geography, and travel were given under the auspices of the National Museum of Canada. They were planned and supervised by a Lecture Committee consisting of M. E. Wilson (Chairman), C. L. Patch, M. F. Goudge, and Miss M. Godwin (Secretary). The lectures were given on Saturdays at 9.45 and 11.00 in the morning for school children, and on Wednesday evenings for adults.

Mr. John A. Marsh, M.P., was compelled to cancel his lecture "Exploring Space", February 3 and February 7. A program of motion pictures was substituted and the lecture committee is greatly appreciative of the assistance of the Associated Screen News, Limited, in supplying motion pictures for this occasion. Owing to the death of His Excellency, Lord Tweedsmuir, the lecture on Yugoslavia was postponed until March 13 and 14. The Lecture Committee expresses its gratitude to the Wholesome Film Service, Incorporated, for allowing the films for this lecture to be retained until the later date.

For loans of films and slides to illustrate the lectures the Museum expresses its thanks to: W. J. Turnbull, Ottawa; T. J. Courtenay, Halifax; Dr. A. Couture, Ottawa; Captain J. W. Kerr, Ottawa; Mr. and Mrs. F. R. Crawley, Ottawa; United States Bureau of Mines, Pittsburgh, Pa.; Wheat Board, Winnipeg; Associated Screen News, Ltd., Montreal; Department of Agriculture, Ottawa; National Gallery of Canada, Ottawa; National Parks Bureau, Ottawa; the Canadian Government Motion Picture Bureau, Ottawa; and the Geological Survey of Canada, Ottawa.

The assistance rendered by the Canadian Boy Scouts Association (Ottawa district) in acting as ushers in the lecture hall during the children's lectures is greatly appreciated by the committee.

Particular acknowledgment is made of the co-operation of the local newspapers in generously providing space for reports and other news of the various lectures.

Following is a list of lectures:

- Volcanoes, by F. J. Alcock, B.A., Ph.D., F.R.S.C., Geological Survey of Canada, Department of Mines and Resources, Ottawa.
- Wheat Production in Canada, by L. H. Newman, B.S.A., D.Sc., Dominion Cerealist, Experimental Farms Branch, Department of Agriculture, Ottawa.
- The Aluminum Industry in Canada, by John C. Annesley, B.A.Sc., Sales Department, Aluminum Company of Canada, Limited, Montreal, Que.
- Highways and Byways of the Maritimes, by J. M. Humphrey, Vancouver, B.C.
- British Columbia, by J. M. Humphrey, Vancouver, B.C.
- Amateur Colour Films and How to Make Them, by F. Radford Crawley, Ottawa.
- The Royal Visit, by Walter J. Turnbull, Director of Public Relations, Post Office Department, Ottawa.
- Prospecting in Quebec, by J. W. Ambrose, B.A., Ph.D., Geological Survey of Canada, Department of Mines and Resources, Ottawa.
- China, by the Rev. W. K. Amyot, Ottawa.
- Sculpture—Landmark and Timemark, by Elizabeth Wyn Wood, A.R.C.A., Toronto.
- Making Maple Sugar, by C. Marius Barbeau, B.A., LL.D., National Museum of Canada, Ottawa.
- Yugoslavia, Where the Heart Lingers, by Madge Macbeth, Ottawa.

The total attendance at twenty-six lectures given to children was 13,125, and at fifteen lectures given to adults 7,570.

MOTION PICTURES

Motion picture films, when not being used for educational activities at the National Museum, are lent to museums, scientific societies, educational institutions, and other related organizations throughout Canada. An indication of the widespread use of these films is shown by the following list of places selected from the mailing list: Baddeck, N.S., Fredericton, N.B., Noranda, Que., St. Remi, Que., Timmins, Ont., Fort William, Ont., Cranberry Portage, Man., Birch Hills, Sask., Moose Jaw, Sask., Kamloops, B.C., and Victoria, B.C. There was a noticeable increase in the number of requests, and the films lent during the year were projected before 154,023 people. Five new 16 mm. silent films were added to the loan library, and three 16 mm. sound films to the Museum library.

LANTERN SLIDES

Sets of lantern slides with lecture notes, on such subjects as geology, biology, anthropology, palaeontology, and geography, were lent, and were seen by 17,202 persons.

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ANTHROPOLOGICAL DIVISION

No field work was undertaken during the year, owing to war conditions.

D. Jenness, Chief of the Division, gave his full time to the Dependents' Allowance Board from the beginning of the year until January 1941. An incidental duty in connection with the Dependents' Allowance Board was the organization, in collaboration with the Indian Affairs Branch, of a satisfactory procedure for dealing with allowances to the dependents of enlisted Indians. He attended several meetings of the Interdepartmental Reindeer Committee during the year. After his return to full-time work at the museum in January 1941, he revised a long, illustrated report on the Material Culture of the Copper Eskimos, one of the volumes originally planned in the series of "Reports of the Canadian Arctic Expedition, 1913-18". He also checked over his manuscript (180 typewritten pages) on the Carrier Indians of British Columbia, which the Bureau of American Ethnology in Washington has undertaken to publish; and for the Parks Branch he drew up plans for an exhibition of Indian material in its museum at Prince Albert National Park. In January 1941, the Carnegie Museum of Pittsburg published a paper by him on the archæology of the Belcher Islands in Hudson Bay.

C. M. Barbeau's services were lent to the Department of National Defence from April 1940 to January 1941, for the most part to the Dependents' Allowance Board of that department, but for two short periods to the Auxiliary Services. At the request of the latter, he prepared two Canadian folk-song booklets for the use of the army. The first booklet, in French, has appeared in two editions, one, under the name of *Le Soldat canadien chante*, for the Canadian Legion, the second, under the name of *Aux Armes, Canadiens*, for the Knights of Columbus. The second booklet, in English, entitled *Come a Singing* is now with the editors.

For a period of about a week in May, Mr. Barbeau was granted permission to do some local research, for the benefit of the Canadian Geographical Society, into the industrial development of agricultural machinery in Ontario. During a vacation of a fortnight in August-September, he investigated four Canadian painters in Montreal and Quebec, at the request of the National Gallery, in preparation for a retrospective exhibition to be held this coming year.

At various times he assisted other organizations, mostly governmental. For the National Parks Bureau he prepared a guide to be used at the Laurier Memorial House at St. Lin, Quebec; also a list of furniture and equipment available for the Habitation at Port Royal. He gave some guidance to the National Film Board in connection with films on "Peoples of Canada" and "The Maple Sugar Industry"; and, at the request of the Film Commissioner, prepared a plan for moving pictures on six Canadian handicrafts, viz., silver work, maple sugar, pottery, wood-carving, folk-songs, and totem-pole carving. He aided Mr. Alan Lomax, head of the folk-song department of the Library of Congress, Washington, in the preparation of an educational broadcast from Montreal of French-Canadian folk-songs, by the Columbia Broadcasting System; and he also assisted the British moving picture company producing the "49th Parallel" in connection with its Canadian itinerary, besides providing it with a set of Canadian folk-songs to be used by Vaughan Williams in musical backgrounds.

In addition to writing several articles, which will appear during the next fiscal year, he prepared a monograph of 75 typed pages on *Canadian Potters*, to form part of a book entitled "Artisans canadiens" soon to appear in Montreal as part of the Zodiaque series. In collaboration with another scholar, he edited a prospective number of the *Journal of American Folk-Lore* containing French-Canadian folk-tales, songs, children's games, and sayings; and he prepared for publication an illustrated book entitled *The Indian Speaks*, consisting of a carefully edited section of Indian texts. In collaboration with others, too, he is editing a *Catalogue raisonné* of old Quebec silver, 400 more items having been recorded in Quebec in early September so that the catalogue now includes about 1,500 items; and he is assembling materials for monographs on *Haida argillite carvings* and *Old Indian silver work on the North Pacific Coast*.

During the past year the French-Canadian folklore collection that Mr. Barbeau has amassed was substantially increased. Ninety songs were recorded in text, 82 of them on the phonograph at Orleans near Ottawa, in which he was assisted by Mr. Leechman, and many more were communicated by correspondents, particularly M. J. T. Le Blanc of Moncton, and François J. Brassard of Jonquière, Chicoutimi. Mr. Barbeau also pursued during week-ends his study of ancient Canadian architecture in rural buildings around Ottawa and Quebec city.

W. J. Wintemberg was occupied during the year in studying and writing a report on the prehistoric Indian village near Middleport, Ontario, which he excavated a few years ago. His report was practically completed in October when he fell seriously ill, and finally retired on superannuation on January 1, 1941.

Douglas Leechman prepared a report on some important Eskimo archaeological specimens from the Cape Dorset culture collected during the

summers of 1935 and 1936. He worked with Adam Sheriff-Scott in preparation of a series of paintings, checking the accuracy of such technical details as tump-lines, the travois, and Eskimo material culture. He worked with C. M. Barbeau in the collection of French-Canadian folk-songs, and prepared a bibliography on aboriginal dentition in the Labrador.

He also gave a series of lectures on the Indians of Canada to Normal and Technical School classes.

W. G. Roberts was responsible for the repair and storage of the anthropological specimens, including a monthly inspection of the entire collection to protect it from moths and other destructive agencies. Towards the end of summer he spent nearly 3 weeks in supervising the removal of a considerable part of the collection from the Blyth building on Frank street to the Vimy Annex building on Sparks street. He installed several exhibits in the west exhibition hall of the division, and, in the rotunda of the museum, set up an exhibit of photographs lent by the Department of Public Information to illustrate Canada's part in the present war.

Publications

Alexis, le trotteur. By Marius Barbeau. *Le Canada français*, Quebec, May 1940.

Marmites ensorcelées. By Marius Barbeau. *Le Canada français*, June 1940.

Construction des navires à Québec. By Marius Barbeau. *Revue du Québec industriel*, Montreal, summer 1940.

Les vapeurs de Montréal. By Marius Barbeau. *Revue du Québec industriel*, Montreal, summer 1940.

Qui manufacturait les machines agricoles? By Marius Barbeau. *Technique*, Montreal, May 1940.

Tisseuses de ceintures fléchées. By Marius Barbeau. *Le Canada français*, Sept. 1940.

Old Port Simpson. By Marius Barbeau. *The Beaver*, Winnipeg, Sept. 1940.

Gaspésiades. By Marius Barbeau. *Le Canada français*, Oct. 1940.

Louis Jobin. By Marius Barbeau. In *Canadian Portraits*, Oxford, England, 1940.

Notre ancienne architecture. By Marius Barbeau. *Revue du Québec industriel*, Montreal, autumn 1940.

La querelle des reliques. By Marius Barbeau. *Le Canada français*, Nov. 1940.

The Modern Growth of the Totem Pole on the Northwest Coast. By Marius Barbeau. *Smithsonian Report for 1940*, Washington. Issued in autumn 1940.

Le totem du nid de l'aigle. By Marius Barbeau. *Le Canada français*, Dec. 1940.

Nos ceintures fléchées. By Marius Barbeau. *La Revue populaire*, Montreal, Nov. 1940.

Le soldat canadien chante. By Marius Barbeau. *La Légion canadienne*, Ottawa, autumn 1940.

Indian Trade Silver of Canada. By Marius Barbeau. *The Minnesota Archaeologist*, Jan. 1941.

Arts in French Canada. By Marius Barbeau. In *French-Canadian Backgrounds*. Ryerson Press, Toronto, Jan. 1941.

Pantagruel au Canada. By Marius Barbeau. *Le Canada français*, Feb. 1941.

Aux Armes, Canadiens! By Marius Barbeau and Arthur Lismer. *Chevaliers de Colomb*, Ottawa, winter 1941.

Old Canadian Silver. By Marius Barbeau. *American Collector*, New York, Feb. 1941.

Déclin de la culture canadienne. By Marius Barbeau. *L'Action nationale*, Montreal, Feb. 1941.

Indian Trade Silver. By Marius Barbeau. The Royal Society of Canada, winter 1941.

The Seafaring Folk of Gaspé. By Marius Barbeau. Queen's Quarterly, spring 1941.
Old Canadian Silver. By Marius Barbeau. The Canadian Geog. Jour., March 1941.

Lectures

Backgrounds in Canadian Art. By Marius Barbeau. The Baconian Club, London, Ont., May 10, 1940.

Indian Trade Silver. By Marius Barbeau. The Roy. Soc., Canada, Sec. II, May 22, 1940.

Maple Sugar—Its Past. By Marius Barbeau. The Roy. Soc., Canada, Sec. II, May 22, 1940.

Notre ancienne architecture. By Marius Barbeau. La Société royale du Canada, Sec. I, May 22, 1940.

How Folk-songs Are Collected and Prepared for Publication. By Marius Barbeau. The Canadian Authors' Association, Ste. Anne de Bellevue, Aug. 1940.

How Folk-songs Are Collected and Preserved. By Marius Barbeau. The St. James Literary Society of Montreal, Oct. 8, 1940.

Why We Have Recorded Folk-songs. By Marius Barbeau. The Ottawa Historical Society, Nov. 8, 1940.

Early Medicine in Canada. By Marius Barbeau. Medical Officers, Dept. of Pensions and National Health, Ottawa, Jan. 3, 1941.

Four lectures on anthropology by Douglas Leechman to classes from Ottawa Normal School, September 23-26, 1940.

Accessions

BY DONATION:

Rev. Fr. Bazin:

Eskimo archaeological material from Igloolik.

Dr. H. S. Bostock:

Chipped stone implements from the Yukon.

Mr. B. L. Butler:

Pair of Montagnais snowshoes.

Mr. J. E. Corrigall:

Chipped basalt point from Saskatchewan.

Rev. Fr. Dutilly:

Eskimo archaeological material, Eastern Arctic.

Dr. H. J. G. Geggie:

Iron door knocker of 1790.

Dr. E. F. Greenman:

Indian grave objects from Georgian Bay.

Dr. A. W. Jolliffe:

Ethnological specimens from Coppermine, N.W.T.

Mr. K. L. Lang:

Ethnological material from Aklavik, N.W.T.

Mr. A. C. Lawson:

Pottery fragments from Rainy River collected in 1888.

Mr. L. A. Learmont:

Eskimo archaeological material from Adelaide Peninsula.

Corp. Duncan Martin, R.C.M.P.:

Eskimo archaeological material from Kittagazuit, N.W.T.

Dr. Duncan C. Scott:

West Coast ethnological specimens.

Mr. F. A. Sproule:

Stone celt or adze, Wolf Lake, Que.

Dr. Lincoln Washburn:

Seal indicator, Cambridge Bay, Victoria Island, N.W.T.

BIOLOGICAL DIVISION

R. M. Anderson, Chief of the Division, continued research on the taxonomy, distribution, economic status, and ecological relations of Canadian mammals. As no field program was undertaken owing to the war, more time was available for accumulated back work, and considerable progress was made in the specific determination of specimens that had been of doubtful status. The usual amount of correspondence in answer to biological queries was carried on. This service is of much benefit to the general public and helps to maintain interest in the institution as a usefully functioning utility, as well as a repository for scientific archives, both objective and written.

Due to the temporary cessation of field activities and the changed status of private individuals interested in the Museum, additions to the mammal collection were considerably fewer than for the past several years. This year they numbered 154 and the catalogued collection of mammals totalled 17,097 specimens on March 31, 1941.

Clyde L. Patch and Claude E. Johnson finished construction of a polar bear habitat group, now installed in the mammal hall. It is 23 feet wide by 13½ feet deep, with a panoramic background 44 feet long by 18 feet high, depicting ice, sea, and sky, with ice pack represented in the foreground. The group shows one adult male and one adult female polar bear with two cubs, and one dead ringed seal lying on the ice. The polar bears were collected by members of the Canadian Arctic Expedition in 1914-15 in the Beaufort Sea region.

Several temporary exhibits of especial interest were arranged and exhibited from time to time in the front lobby of the Museum, including the first recorded find of the nest and eggs of Ross's goose, taken near Perry River, N.W.T., in the summer of 1940, and presented through R. H. G. Bonnycastle of the Hudson's Bay Company; and 44 old whale-oil, camphene, candle, and other sorts of antique Canadian lamps lent by W. J. Wintemberg. Line drawings, departmental signs, coloured lantern slides, plaster and rubber moulds, and casts of scientific material were prepared, and a large amount of Museum material was labelled and numbered.

D. J. Blakely continued the general preparation of specimens of smaller birds and mammals. Fourteen additions and replacements of mammals and birds were collected and mounted for the school loan collection, and 137 specimens were lent to educational institutions for use in art work and visual nature study.

J. E. Perron continued the work of tanning, thinning, and drumming skins of large mammals, as well as the cleaning of skulls and other skeletal material and helping in general taxidermic work.

Publication

A Biological Investigation of the Thelon Game Sanctuary (Mackenzie district, N.W.T.), by Dr. C. H. D. Clarke; National Museum of Canada, Bull. 96, 1940, pp. iv, 135, pls. 28, figs. 4 (maps, folded).

MAMMALS

Accessions

By Gift:

Dr. Harold B. Hitchcock, Department of Zoology and Applied Biology, University of Western Ontario, London: 104 specimens of eastern cave bat, *Myotis sodalis*; 5 southern pipistrelle, *Pipistrellus s. subflavus*; from Carter Caves, Carter county, Kentucky, March 23, 1940, a species not heretofore represented in National Museum collection; 2 *Myotis sodalis*, taken Jan. 18, 1941, in LaFlèche cave, near St. Pierre de Wakefield, Gatineau county, Quebec, the first record for this species in the province of Quebec, and the third for Canada; 3 *Pipistrellus subflavus obscurus*, New York pipistrelle, two from cave near Latta, Hastings county, Ontario, Jan. 17, 1941, the fourth Canadian record, and one from LaFlèche cave, Que., Jan. 18, 1941, the first record for this species in the province of Quebec, and the fifth for Canada; 1 little brown bat, *Myotis lucifugus lucifugus*, from cave near Latta, Ontario; all the above bats were in hibernating quarters.

R. E. Balch, Entomological Branch, Department of Agriculture: 9 specimens of long-tailed shrew, *Sorex cinereus*, sent in from New Brunswick in connection with forest insect investigations.

National Parks Bureau, Department of Mines and Resources: 9 mounted heads (3 bighorn sheep, 1 mountain goat, 1 prong-horned antelope, 2 caribou, 2 bison; 1 mounted specimen of sun bear (Asiatic species)). A skin and complete skeleton of large male northern timber wolf, taken in Prince Albert National Park, Sask., March 21, 1941, and one female skull of the same species taken in the same park January 31, 1941; by courtesy of Herbert Knight, Park Superintendent.

Institute of Parasitology, McGill University, Macdonald College, Quebec: 1 cranium of Eskimo dog from Hudson strait; 1 large Labrador vole, *Microtus caninus*; 2 Labrador lemmings (*Dicrostonyx hudsonius*) from Port Harrison, east side of Hudson Bay, collected by the late L. L. Lyster of the Institute of Parasitology while on the Canadian Arctic Expedition of 1939; 1 Pennsylvania meadow mouse, from southern Quebec.

G. H. Turner, Fort Saskatchewan, Alta.: 1 northern white-footed mouse, *Peromyscus maniculatus*, in abnormal silvery coloration.

Dr. P. A. MacIntosh, Spencerville, Grenville county, Ont.: 1 rufescence woodchuck, *Marmota monax rufescens*, in the flesh; near albino specimen.

Miss Heather Jones, Ottawa: 1 grey squirrel, *Sciurus carolinensis leucotis*, in the flesh.

Royal Canadian Mounted Police: One Ellesmere Island hare, collected by L/C R. W. Hamilton, Craig Harbour detachment, in summer of 1939; skin and skeleton.

Thomas A. Walker, Stuie, Bella Coola dist., B.C.: British Columbia red fox, skeleton.

Dr. Hugh S. Bostock, Bureau of Geology and Topography, Department of Mines and Resources: One grizzly bear, *Ursus pellyensis?*, part of cranium, taken 50 miles east of Dawson, Yukon territory, about 1937.

A. E. Porsild, National Museum, Ottawa: One skull of Arctic hare, *Lepus arcticus* subsp., from Godthaab, Greenland, taken in 1940.

Dr. C. H. D. Clarke, National Parks Bureau, Department of Mines and Resources: One white-lipped water-shrew, *Sorex palustris albobarbis*, from Laniel, Pontiac county, Quebec.

Mrs. Wm. Anderson, McKellar townsite, Carleton county, Ont.: One eastern striped skunk, *Mephitis mephitis*, presented alive, in trap.

Professor V. W. Jackson, Department of Zoology, University of Manitoba, Winnipeg: One Hudson Bay red squirrel, *Tamiasciurus hudsonicus hudsonicus*, eased skin, in abnormally light yellowish winter coat, obtained from Mrs. F. L. L. Campbell, general merchant and fur trader at Grand Rapids, near mouth of Saskatchewan River, northwest side of Lake Winnipeg, Manitoba.
P. Brown, Provincial Game Warden, Vanderhoof, B.C.: skeleton of female marten, *Martes americana*.

By Staff:

- R. M. Anderson: One red squirrel, *Tamiasciurus hudsonicus loquax*, Gatineau county, Quebec.
- D. J. Blakely: One meadow mouse, *Microtus pennsylvanicus*; one northeastern chipmunk, *Tamias striatus lysteri*; from Ottawa area.
- C. E. Johnson: One eastern muskrat, *Ondatra zibethica zibethica*.

By Exchange:

American Museum of Natural History, New York City: plaster cast of type skull of Anderson grizzly, *Ursus andersoni* Merriam (1918), taken on east branch of Dease River, east end of Great Bear Lake, Northwest Territories, in 1910. In exchange for cast of type skull of Alaska Boundary grizzly, *Ursus inter-nationalis* Merriam (1918).

By Purchase:

Miss Gladys Trafford, St. Eugene, Ont.: group of 3 American opossums, *Didelphys virginiana*, one albino and two in normal pelage, mounted by the late Oliver Trafford.

AMPHIBIANS AND REPTILES:

By Gift:

H. J. Harrold, 252 Frank street, Ottawa: 1 skin of African python, 1 skin of African black mamba.....	2
V. N. Bruce, Whitefish Lake, Quebec.....	2
J. V. Butterworth, Otty Lake, Ontario	2
S. J. Duncan, Kingsmere Lake, Quebec.....	1
Gifford H. Johnson, Danford Lake, Quebec.....	2

ORNITHOLOGICAL DIVISION

The work of the Division under P. A. Taverner, Chief Ornithologist, was concentrated upon rearranging, studying, and systematizing existing collections, and in perfecting various filing and bibliographical systems. There were numerous requests from the public for ornithological information. Material has been lent to and borrowed from other public institutions and research scientists for the purpose of study. A number of technical reports on the results of the study of Canadian birds were prepared.

Additions to the collection, though not numerous, included a scissortailed flycatcher from Noranda, Que., donated by Mrs. C. E. Bent of Noranda. This is the third specimen of this southern species to be taken in our northern latitudes. Notable also is a set of eggs of Ross's goose, the first wild eggs of this species ever taken, the gift of the Hudson's Bay Company, through its representative, Mr. R. H. G. Bonnycastle, of Winnipeg.

Publications

By P. A. Taverner:

The Canadian Status of the Long-tailed Chickadee, *Penthestes atricapillus septentrionalis*; *The Auk*, 57, pp. 536-541 (1940).

The Distribution of the Western Solitary Sandpiper, *Tringa solitarius cinnamomea*; *The Condor*, 42, pp. 215-217 (1940).

Birds in Canada's National Parks; *The Canadian Geographical Journal*, 19, pp. 239-255 (1940).

The Nesting of Ross's Goose, *Chen rossi*; *Canadian Field-Naturalist*, 54, pp. 127-130 (1940).

In collaboration with R. Sutton—A Preliminary List of Birds of the Riding Mountain Park, Man., was prepared for the National Parks Bureau and mimeographed by them for the use of naturalists and visitors to that Park.

Breeding Grounds of Ross's Goose at Last Discovered; *The Auk*, 58, p. 92 (1941).

A paper on our late Honorary Curator of Birds, Mr. James Henry Fleming, of Toronto, was prepared and read before the Memorial Meeting of the Brodie Club, of Toronto, on November 5, and was included in the Fleming Memorial volume by that organization.

A number of short notes of record and reviews of various Canadian ornithological publications have also appeared in scientific journals.

BIRDS

Accessions to Museum

By Donation:

Ravell Johnson, Ottawa: 1 common pheasant, *Phasianus colchicus*, in the flesh.

Mrs. C. E. Bent, Noranda, Que.: mounted scissor-tailed flycatcher, *Muscivora forficata*, Noranda, Que., Oct. 30, 1938.

Dr. Ralph E. DeLury, Ottawa: rose-breasted grosbeak, *Hedymeces ludovicianus*, Ottawa, in the flesh.

F. H. Osborne, Harrington Harbour, Saguenay county, Que.: 6 common eiders, *Somateria mollissima*, and 1 red-throated loon, *Gavia stellata*, salted skins, Harrington Harbour, Que.

W. R. Workman: pigeon hawk, *Falco columbarius*, Ottawa, in the flesh.

C. B. Tidd, Dawson, Yukon: wing of mourning dove, *Zenaidura macroura*, Dawson, Y.T., demonstrating considerable extension of specific range.

R. W. Tufts, Wolfville, N.S.: 1 red-breasted merganser, *Mergus serrator*, in the flesh, N.S., November; 1 glaucous gull, *Larus hyperboreus*, in the flesh, Lunenburg county, N.S., Feb. 10, 1941; desiccated carcass of Arkansas kingbird, *Tyranus verticalis*, Lunenburg county, N.S., Jan. 26, 1941, a rare straggler.

B. W. Cartwright, Winnipeg: black duck, *Anas rubripes*, Athabasca Delta, Alta., Sept. 23, 1940.

Robert Anderson, Harrington Harbour, Saguenay county, Que.: Richardson owl, *Cryptoglaux funerea*, rough skin, Harrington Harbour, autumn, 1940.

R. W. Smith, Kingston, Ont.: 1 great horned owl, *Bubo virginianus*, Wolfville, N.S., Aug. 25, 1932.

F. W. Osborne, Harrington Harbour, Saguenay county, Que.: 1 great horned owl, *Bubo virginianus*, in the flesh.

A. E. Porsild, Ottawa: mallard, *Anas platyrhynchos*; brant, *Branta bernicla*, Godthaab, Greenland, Oct. and Nov. 1940.

The Hudson's Bay Company, per R. H. G. Bonnycastle, Winnipeg, Man.: salted skin Ross's goose, *Chen rossi*, and 3 eggs of the same, Perry River, N.W.T., July 1940.

R. W. Hamilton, R.C.M.P., Craig Harbour, North Devon Island: white gyrfalcon, *Falco rusticolus*, Craig Harbour, summer, 1939.

F. W. Whitman, Ottawa: Cooper's hawk, *Accipiter cooperi*, in the flesh, Ottawa, Oct. 6, 1940.

Hoyes Lloyd, Ottawa: chimney swift, *Chaetura pelagica*, in the flesh, Ottawa, Aug. 2, 1940.

NATIONAL HERBARIUM

A. E. Porsild, on loan to the Department of External Affairs, left Ottawa on May 20 to assume the post of Canadian Vice-Consul to Greenland. He returned on December 30, 1940, and continued work on Canadian botany for the remainder of the fiscal year. In late May, most of the front room space of the National Herbarium was given over to the Postal Censorship Branch.

Miss H. T. Harkness continued labelling, mounting, and inserting specimens in the systematic collection. Altogether 4,798 sheets were thus mounted and over 1,000 labelled. In addition, over 1,000 mounted sheets were repaired.

Owing to the war, the use of the Herbarium by visiting botanists declined to some extent. A total of 84 visitors consulted the Herbarium, and those who carried out more extended studies spent 17 full days there. About 200 letters were written dealing with various requests for botanical information.

Professor Thomas M. C. Taylor, Department of Botany, University of Toronto, continued work on the flora of the north shore of Lake Superior, and reported in March that about 10,000 specimens from Thunder Bay district had been determined and were ready for distribution. The systematic work by Professor Taylor and the ecological reports by Professor Robert C. Hosie, Faculty of Forestry, University of Toronto, on five seasons of botanical work in the Lake Superior region, will add much to the knowledge of the area.

On regular exchanges, 3,288 specimens were distributed to other herbaria; 1,610 were lent for study to other institutions in Canada and in the United States; and 580 were borrowed for study. Accessions to the Herbarium totalled 2,471 specimens, and, at the end of the fiscal year, the number of specimens in the National Herbarium was 160,426.

In February 1941, a most valuable donation was made to the National Herbarium by Dr. Francis H. Gisborne, K.C., of Ottawa. This consisted of a first edition of the very rare *Flora Londinensis*, in six folio volumes, containing 419 hand-coloured plates with letter-press. Supplementary to the printed volumes was a fine collection of pressed British plants, mounted in twenty large, beautifully bound folios. Although some of these plants are now over 150 years old, having been collected in 1791, all are still in excellent condition. This collection is of great historical value and, when properly indexed, will be most valuable also for taxonomical work.

Lecture

Porsild, A. E., Radio talk on Greenland, CBO, May 8, 1940.

Publications

Porsild, A. E., Contributions from the National Herbarium, I and II, Canadian Field-Nat., Ottawa, 54:54-55 (1940); *Ibid.*, 54:68-69 (1940).

Polunin, Nicholas, Botany of the Canadian Eastern Arctic, Part I, *Pteridophyta* and *Spermatophyta*, Nat. Mus., Canada, Bull. No. 92, Biol. Series No. 24, 1940, pp. vi, 408, 8 pls., 1 fig. (sketch map showing subdivisions of the eastern Arctic, in folder).

Accessions

<i>Plants received on account of exchange</i>	1,759
Arnold Arboretum, Harvard Univ., Jamaica Plain, Mass.	97
A. J. Breitung, McKague, Sask.	304
University of California, Berkeley, Calif.	267
Cornell University, Ithaca, N.Y.	147
University of Wisconsin, Madison, Wis.	22
Gray Herbarium, Harvard University, Cambridge, Mass.	175
Agricultural College of Utah, Logan, Utah	525
Dr. Morten P. Porsild, Godhavn, Greenland	41
U. S. National Herbarium, Washington, D.C.	145
Provincial Museum, Victoria, B.C.	36
<i>Plants received as donations</i>	710
Miss M. S. Brown, Halifax, N.S.	1
Henry Mousley, Montreal, Que.	1
C. O. Hage, Dept. Mines and Resources, Ottawa	200
Dr. Hugh S. Bostock, Dept. of Mines and Resources, Ottawa	49
Dr. C. Heimburger, Dept. of Mines and Resources, Ottawa	50
F. W. Gould, Univ. of California, Berkeley, Calif.	21
Miss J. Robertson, Cleveland, Ohio	138
J. P. Anderson, Juneau, Alaska	230
<i>Plants sent on account of exchange</i>	3,288
Arnold Arboretum, Harvard Univ., Jamaica Plain, Mass.	78
A. J. Breitung, McKague, Sask.	236
Cornell University, Ithaca, N.Y.	100
Ira W. Clokey, Pasadena, Calif.	243
Gray Herbarium, Harvard Univ., Cambridge, Mass.	633
Agricultural College of Utah, Logan, Utah	308
University of Montreal, Montreal, Que.	407
Philadelphia Academy of Science, Philadelphia, Pa.	20
University of Saskatchewan, Saskatoon, Sask.	345
U. S. National Herbarium, Washington, D.C.	439
Provincial Museum, Victoria, B.C.	479
<i>Plants lent</i>	1,610
Gray Herbarium, Harvard Univ., Cambridge, Mass.	659
University of California, Berkeley, Calif.	90
University of Maine, Orono, Maine	418
Henry Mousley, Montreal, Que.	96
Agricultural College of Utah, Logan, Utah	211
Bailey Hortorium, Cornell University, Ithaca, N.Y.	2
Philadelphia Academy of Science, Philadelphia, Pa.	38
University of Michigan, Ann Arbor, Mich.	94
University of Arizona, Tucson, Ariz.	2
<i>Plants borrowed</i>	580
J. P. Anderson, Juneau, Alaska	580

EDUCATIONAL WORK

VISITORS AND SCHOOL VISITS

The exhibition halls were visited during the year by 133,643 persons. In addition, thousands of junior and senior school classes came in organized groups. As an example, the Ottawa Public School Board continued its weekly classes in biology, anthropology, and palaeontology, in conjunction with the Museum. There was a total attendance at these classes of 7,440 pupils.

LECTURE HALL

The National Museum maintains a lecture hall equipped with motion picture projectors and a projection lantern. During the year, in addition to its use by the Museum, there were 83 reservations of the hall by scientific or educational organizations. There was a total of 16,062 persons at these meetings.

LECTURES AND MOTION PICTURE PROGRAMS

As a part of its service to the public, the National Museum organizes each year a program of lectures and motion pictures related to its activities. Two series of lectures covering subjects such as biology, geography, and travel were given during the year. The Lecture Committee, having in mind the importance of presenting to the public information on the activities of the armed forces, arranged, in addition, two lectures and one program of motion pictures with the co-operation of the Royal Canadian Navy, the Royal Canadian Air Force, and the National Film Board of Canada.

The total attendance at the children's Saturday morning lectures was 10,600 and at the Wednesday evening lectures for adults, 6,000.

Following is a list of the lectures:

- India's Three Hundred and Sixty Millions. By Rev. Charles D. Donald, B.A., B.D., Ottawa.
- Around the Year with Ottawa Birds. By Hoyes Lloyd, M.A., Supt. Wild Life Protection, National Parks Bureau, Ottawa.
- British Commonwealth Air Training Plan. By Flying Officer N. A. Nunn, Headquarters, Air Ministry, Ottawa.
- Glimpses of our National Parks in Colour. By R. J. C. Stead, Supt. Parks and Resources Publicity, National Parks Bureau, Ottawa.
- With Williamson Beneath the Sea. (Motion Picture.)
- Documentary Films—Britain at War. By John Grierson, Government Film Commissioner, National Film Board, Ottawa.
- Mexico. By Dr. G. M. Geldert, Ottawa.
- The Navy in Wartime. By Commander F. L. Houghton, Royal Canadian Navy, Ottawa.
- Iceland. By Rev. H. I. S. Borgford, Ottawa.

MOTION PICTURES AND LANTERN SLIDES

Motion pictures and lantern slides, when not in use at the National Museum, are lent to other museums, scientific societies, educational institutions, and other related organizations throughout Canada. These films and slides were seen by 185,302 persons during the year.

MISCELLANEOUS

Supplying to individual inquirers information by correspondence, identification and loan of specimens of scientific interest, and the selection of photographs to illustrate textbooks, and other scientific and popular publications, and for teaching purposes, were other activities of this section of the National Museum.

NATIONAL MUSEUM OF CANADA

ANNUAL REPORT 1941-42

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ANTHROPOLOGICAL DIVISION

No field work was undertaken during the year.

D. Jenness, Chief of the Division, wrote an obituary on the late W. J. Wintemberg for publication in the Transactions of the Royal Society of Canada, and submitted a paper entitled "Eskimo Remains in Ellesmere Island" at the meeting of that society. He arranged for a joint meeting between an Indian-Eskimo Committee of the Canadian Handicrafts Guild and officials of the Indian Affairs and Northwest Territories branches. On June 13 he took up his duties with the R.C.A.F., as Deputy Director of Intelligence.

C. M. Barbeau has given most of his attention during the year to the preparation of an extensive monograph entitled *Haida Carvings in Argillite*. He also assisted several organizations in various projects, particularly the Canadian Film Board. He helped Mrs. Laura Boulton, an employee of that Board, to record some 400 French Canadian and English Canadian folk songs on disks. He assisted the Film Board also in preparing two other films, one entitled *Maple Sugar*, and the other *Canadian Handicrafts*. Similarly he assisted Mr. and Mrs. Crawley with their film *Portage* (early methods of transportation), produced for the Canadian Geographical Society; and the Arts Association of Montreal, in organizing an exhibition of Old Quebec Arts, during the three summer months. With Leechman's assistance Mr. Barbeau selected 200 of the best records of French Canadian folk-songs and forwarded them to the Library of Congress, Washington, for reproduction on disks. The original records will be returned in due time, together with a complementary set of copies.

During the year Mr. Barbeau added the following items to his French Canadian folk-lore collections: 314 folk-songs with texts and melodies; 125 folk-songs with texts but without melodies; phonograph records of 22 fiddle and dance tunes; 100 photographs illustrating arts and handicrafts; and miscellaneous other records. He has completed some manuscripts on French Canadian folk tales, nursery rhymes, and children's games, which are to be published in Montreal in the near future.

Douglas Leechman was promoted to the position of Assistant Archæologist. He prepared a report on two Dorset Eskimo sites that he excavated in the Hudson Bay region during 1935 and 1936, and submitted this report to the journal *American Antiquity*. He wrote another short paper, published by *The American Anthropologist* in its January issue, on the haliotis shells used by the British Columbia Indians, and prepared a short guide to the Ottawa museums for the Canadian Travel Bureau. He also prepared three reports left by the late W. J. Wintemberg; one of these reports, on "The Geographical Distribution of Pottery in Canada", is to be published by *American Antiquity*. Another useful task that he performed was the cataloguing of Mr. Wintemberg's library, which had been left at the museum; Mr. Leechman was able to sell the entire library for a reasonable sum, to the benefit of Mr. Wintemberg's widow.

Classes from the public schools and from the Ottawa Normal School visited the museum as in other years and were conducted through the exhibition halls by Mr. Leechman. He also supplied information to visitors and correspondents on a variety of topics, from Indian music and early Canadian silver to the making of moving pictures in sub-zero temperatures.

Under Mr. Leechman's supervision, Mr. Roberts moved part of the archaeological collection to the Vimy Annex building on Sparks street, and gathered together the specimens required for an exhibition in Prince Albert National Park. He installed special exhibits of war photographs and war posters and arranged a special exhibition for the Canadian Geographical Society on the occasion of its annual meeting. Mr. Roberts, under Mr. Leechman's supervision, has rearranged part of the archæological collection, which had been thrown into confusion by frequent moving from place to place, has kept in order the exhibition halls, and inspected all specimens monthly to guard them against damage from moths and other insects.

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La plainte du coureur de bois. By Marius Barbeau. Almanach du Peuple, Montreal, (Dec.) 1941.

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Backgrounds in Canadian Art. By Marius Barbeau. Trans., Royal Society of Canada, Ottawa, 1941.

Potiers canadiens. By Marius Barbeau. Mémoires de la Société royale du Canada, Ottawa, 1941.

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Louis Jobin. By Marius Barbeau. The Vancouver Daily Province, January 10, 1942.

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L'hiver des corneilles. By Marius Barbeau. "Le Recueil," Quebec, March 1942.

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Folk Songs—How They are Collected. By Marius Barbeau. The Women's Art Society, Montreal, December 2, 1941.

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Indians of Today. By Douglas Leechman. Y.M.C.A. Boys' Club, Ottawa, July 21, 1941.

Teaching Lessons on the Canadian Indians. By Douglas Leechman. Normal School, Ottawa, September 15, 16, 17, and 18, 1941.

Vegetable Dyes. By Douglas Leechman. Ottawa Field-Naturalists' Club, March 12, 1942.

Accessions

By PURCHASE

Small archaeological collection from Adam Sound, collected by an Eskimo.

By DONATION

Miss Georgina Carmen:

Maple sap spile from Iroquois, Ont.

Paul Coze:

Four phonograph records of Prairie Indian songs.

Mrs. R. Wilson:

Dentalium and bead necklaces from Alert Bay, B.C.

Miss Frederica Woodrow:

Eskimo doll's clothing from Chesterfield, N.W.T.

George Bleakney:

Chipped stone arrowhead from Marshall's Bay, Ontario.

Kane Cameron:

Polished stone celt from Portage du Fort, Que.

Capt. H. A. Dowler:

Chipped stone drill from Veteran, Alta.

P. G. Downes:

Pottery fragments and steatite pipe from Reindeer Lake, Sask.

Tingley McEvoy:

Small archaeological collection from Cape Breton, N.S.

F. J. Michell:

Small archaeological collection from Stony Beach, Sask.

Lincoln Washburn:

Arrowhead of antler and slate blade from Coronation Gulf.



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W. J. Wintemberg

**BIBLIOGRAPHY OF W. J. WINTEMBERG
1899-1947**

William John Wintemberg joined the staff of the National Museum of Canada in 1911 and retired shortly before his death in 1941. He was the first archaeologist in Canada to study the various aboriginal cultures of Ontario scientifically and was long recognized as the leading authority on that subject. He spent many summers in active work in the field and published the results of most of his major excavations.

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Douglas Leechman

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The Use of Shells by the Ontario Indians; *Ont. Dept. Educ., Archæol. Rept.*, pp. 38-90, 1907.
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BIOLOGICAL DIVISION

R. M. Anderson, Chief of the Division, continued the preparation of a check-list of Canadian mammals. Much of this, particularly the sections relating to "Range" or "Geographic Distribution" of each form known to occur in Canada, was rewritten and revised. Many of these ranges have hitherto been unrecorded for lack of sufficient material from critical areas where actual occurrence of species or intergradation of different races had not been adequately demonstrated. For others engaged in preparing preliminary faunal reports on several of the National Parks of Canada, about 200 specimens were determined, bibliographical references looked up, and data verified from Museum material. Also, mammals acting as hosts to parasites were determined for the Institute of Parasitology, Macdonald College, as well as for the Entomological Branch in connection with its investigations of the European spruce sawfly in New Brunswick and eastern Quebec.

Cessation of field work, owing to the war, reduced the number of specimens added to the collection to 48, mainly gifts, although a few were collected locally by members of the biological staff. On March 31, 1942, the catalogued collection of mammals totalled 17,145 specimens. These include a small collection of mounted specimens with a few good habitat groups and the large research collection that covers many extensive areas not well represented in any other collection.

Considerable progress was made in specific and subspecific determination of specimens that had been of doubtful status pending completion of biological surveys in various localities. Several new subspecies were recognized and their ranges provisionally delimited and descriptions written and accepted for publication. Numerous specimens were supplied with additional labels or revised names to accord with accepted modern zoological nomenclature.

Austin L. Rand was appointed Assistant Zoologist in the Division of Biology, and reported for duty on February 16, 1942.

Claude E. Johnson devoted considerable attention to work on a large exhibit installed in the Museum hall illustrating the natural history features of the recently established Gatineau Park, a few miles north of Ottawa. This involved preparing 4 large panels lettered and bordered for lists of plants, mammals, birds, reptiles, amphibians, and fishes; making 53 miniature coloured drawings to be placed on a large relief map, and a number of large museum labels requiring hand lettering and colouring. Altogether 3,858 mammal skulls and skins were labelled and necessary revisions added to the catalogue. Seven plaster casts and rubber moulds were made of skulls of rare Canadian bears, many photos were retouched and coloured, and 120 lantern slides were coloured.

Clyde L. Patch continued his work in the laboratories in arranging new permanent and temporary exhibits and in repairing old mounted specimens. He answered a number of inquiries concerning herpetology and completely renewed preservative in the containers of the amphibian and reptile study collections. With the assistance of Claude E. Johnson, an exhibit concerning Gatineau Park was prepared for display in the Museum

building lobby. Mr. Patch was also an active member of the Museum Lecture Committee. In September, the taxidermy laboratory and preparation rooms were moved from the Motor Building to the old Mines Branch building on Sussex and George streets.

J. E. Perron, in addition to assisting the chief taxidermist, prepared 534 skulls of mammals and skeletons for the osteological collections. About 12 large- and medium-sized mammal skins were tanned.

D. J. Blakely prepared 110 birds and small mammals for the study collection. Also, 14 additions and replacements to the school loan collection were collected and prepared by him. Two hundred and one birds and mammals were lent from this collection to educational institutions.

MAMMALS

Accessions to Museum

By Gift:

National Parks Bureau, Lands, Parks and Forests Branch, Dept. of Mines and Resources: one American marten (*Martes americana*) from Elk Island National Park, originally from Jasper National Park, Alta., eased skin; 3 northern timber wolf (*Canis lupus occidentalis*).

Herbert Knight, Supt. Prince Albert National Park, Saskatoon: One male adult skin with complete skeleton, one male adult and one female adult with skulls only.

Administration of Northwest Territories, Dept. of Mines and Resources: 1 Arctic ground squirrel (*Citellus parryii parryii*), skin, albino, taken at Reindeer Station, east side of Mackenzie River delta, by J. A. Parsons, General Foreman, Reindeer Station.

Institute of Parasitology, Macdonald College, Que.: 1 white whale (*Delphinapterus leucas*), foetus, about 1 foot long, taken near Pangnirtung, Cumberland Sound, east side of Baffin Island, N.W.T.

Bureau of Geology and Topography, Section of Palaeontology, Dept. of Mines and Resources, Ottawa: 1 black bear (*Ursus americanus*), skull of specimen killed at Osgoode, Carleton county, Ont., near Ottawa, in 1835; 2 Alaska fur-seal (*Callorhinus alascanus*), 1 female adult and 1 subadult skull.

Professor V. W. Jackson, Dept. of Zoology, Univ. of Manitoba, Winnipeg: 1 Drummond meadow mouse (*Microtus pennsylvanicus drummondii*), skin and skull, abnormally coloured coat.

Dr. H. H. Leim, Director, Atlantic Biological Station, Fisheries Research Board: 1 skull of short-tailed shrew (*Blarina brevicauda*), from stomach of speckled trout, Balls Lake, N.B.

Frank L. Farley, Camrose, Alta.: 1 northern white-footed mouse (*Peromyscus maniculatus borealis*), melanistic specimen.

Geoffrey Hughson and Ross MacKay, Ottawa: 2 Mearns flying squirrel (*Glaucomys sabrinus macrotis*), from island in Blue Sea Lake, Gatineau county, Que., in the flesh.

R. H. Sweeting, Gull Lake, Sask.: 1 long-tailed weasel (*Mustela frenata longicauda*), presented alive in 1940, and kept in captivity until June 4, 1941.

Dr. C. H. D. Clarke, Ottawa: 1 southern varying hare (*Lepus americanus virginianus*), from Black Donald, Renfrew county, Ont., in the flesh, in nearly full summer coat, November 17, 1941.

Dr. R. T. D. Wickenden, Ottawa: 2 white-tailed deer (*Odocoileus virginianus borealis*), skulls, females, from near Calabogie, Renfrew county, Ont.; 2 red fox (*Vulpes fulva*), skulls, Russell county, Ont.

G. Sonley, Ottawa. 1 LeConte white-footed mouse (*Peromyscus maniculatus gracilis*), 1 red-backed mouse (*Clethrionomys gapperi gapperi*).

Mrs. W. G. Langham, Carmacks, Yukon: 1 red squirrel (*Tamiasciurus hudsonicus columbiensis*), hunter's skin, melanistic; through courtesy of Dr. Hugh S. Bostock, Bureau of Geology and Topography.

B. F. Tinney, Experimental Station, Dominion Dept. of Agriculture, Charlottetown, P.E.I.: 2 specimens of maritime white-footed mouse (*Peromyscus maniculatus abietorum*).

Wm. M. Anderson, McKellar Townsite, Carleton county, Ont.; 1 Bonaparte short-tailed weasel (*Mustela cicognanii*), skull only; skin examined.

A. E. Porsild, Ottawa: 3 south Greenland hares (*Lepus arcticus porsildi*), from mountain near Godthaab, Greenland, skulls with cervical vertebrae.

J. Dewey Soper, Chief Federal Migratory Bird Officer for the Prairie Provinces, Winnipeg, Man.: 1 Prairie phenacomys (*Phenacomys ungava*), from Riding Mountain National Park, Man.; skin and skull.

Charles Elton, Director Bureau of Animal Population, University Museum, Oxford, England: 11 Labrador lemming (*Dicrostonyx hudsonius*), 7 skins with skulls, and 4 additional skulls, collected on Belcher Islands, southeastern part of Hudson Bay, by Ernest H. Riddell, Hudson's Bay Company.

R. E. Balch, Entomologist in charge, Dominion Entomological Laboratory, Fredericton, N.B.: 2 shrews (*Sorex*) from Grand Cascapedia River, Gaspe county, Que., 4 white-footed mice (*Peromyscus maniculatus abietorum*), and 2 red-backed mice (*Clethrionomys gapperi*), from Acadia Forest Experiment Station, New Brunswick.

By Staff:

2 northeastern chipmunks (*Tamias striatus lysteri*), 1 red squirrel (*Tamiasciurus hudsonicus loquax*), 1 Mearns flying squirrel (*Glaucomys sabrinus macrotis*), 1 house mouse; collected by R. M. Anderson, D. J. Blakely, and C. E. Johnson, all in Ottawa district (Carleton county, Ont., and Gatineau county, Que.).

ORNITHOLOGICAL DIVISION

P. A. Taverner, Chief Ornithologist, confined his activities to the study of existing collections, to the revision of past work, and to routine office work. Detailed studies were made of the Hudsonian curlew, *Phaeopus hudsonicus*, and the great horned owl, *Bubo virginianus*, the results of which had been needed in the Museum for a number of years.

There was the usual number of inquiries from observers of all classes in Canada and abroad, some of which required considerable research to answer. The Canadian bibliography of birds was continued and more than 1,000 cards were written, map-spotted, and filed. The usefulness of this bibliography is demonstrated almost daily in the answering of questions.

A. L. Rand devoted his time to ornithological studies. The ornithological collections were studied by a number of visiting ornithologists, and loans of material for research were made to other museums. Other institutions were liberal in lending essential specimens to the National Museum.

Publication

Taverner, P.A.: "The Distribution and Migration of the Hudsonian Curlew"; The Wilson Bulletin, vol. 54, pp. 3-11, 1942.

Accessions to Museum

BIRDS:

By Gift:

Lloyd, Hoyes, National Parks Bureau: chimney swift, *Chaetura pelagica*, Ottawa, in the flesh.
 Whitmore, F., Ottawa: Cooper's hawk, *Accipiter cooperi*, Ottawa, in the flesh.
 Hyde, (?): 1 long-eared owl, *Asio wilsonianus*, in the flesh, found dead on C.N.R. train from Toronto.
 Dorin, C., Ottawa: 1 canary, in the flesh.
 Fauvel, F. A.: one oven-bird, *Seiurus auracapillus*, in the flesh, Ottawa.
 Hoare, W., Ottawa: One parula warbler, *Compsothlypis americana*, in the flesh, Ottawa.
 Shaffer, M.: One grass paroquet, in the flesh.
 Bourguignon, A. E., Ottawa: One knot, *Calidris canutus*, in the flesh, Ottawa.
 Clarke, C. H. D.: One nighthawk, *Chordeiles minor*, in the flesh, Ottawa.
 Wiles, N.B.: One red-tailed hawk, *Buteo borealis*, in the flesh, Ottawa.
 Pegg, F. H., Glenlevis, Alberta: hoary redpoll, *Acanthis hornemannii exilipes*, flat skin, Glenlevis, Alta.
 National Parks Bureau: Two sharp-tailed grouse, *Pedioecetes phasianellus*, in the flesh, Jasper Park, Alta.
 Mousley, Henry, Montreal: Small bird skins, Quebec.
 Mathewson, Hon. T. Arthur: Nine Barrow's golden-eyes, *Glaucionetta islandica*, in various plumages, mounted, Rimouski, Que.
 Shipman, A. S., Ottawa: European starling, *Sturnus vulgaris*, in the flesh, with greatly overgrown lower mandible, Ottawa.
 Royal Ontario Museum of Zoology, Toronto: One Chukar partridge, *Alcatoris graeca*, from captivity.
 Quion, N.: One common loon, *Gavia immer*, Farrelton, Que., in the flesh.
 Curtis, M.: Five ruffed grouse, *Bonasa umbellus*, Athens, Ont.
 Hennessey, T., National Parks Bureau: One nighthawk, *Chordeiles minor*, Ottawa, in the flesh.
 Quinn, H. S.: One ruby-throated hummingbird, *Archilochus colubris*, Ottawa, in the flesh.
 Campbell, J.: One ruby-throated hummingbird, *Archilochus colubris*, Ottawa, in the flesh.
 Melburn, M., Ottawa: One parula warbler, *Compsothlypis americana*, in the flesh, Ottawa.
 Manning, T., British Arctic Expedition: 27 bird skins from southwestern Baffin Island.
 Wilk, A. L., Camrose, Alta.: One pigeon hawk, *Falco columbarius*, Millet, Alta.
 Tufts, R. W., Wolfville, N.S.: One great horned owl, *Bubo virginianus*, in the flesh, Nova Scotia.

By Staff:

Museum Biological Division: 28 specimens, from Ottawa.
 Porsild, A. E.: Six Greenland birds.
 Palaeontological Division: One domestic (?) goose, mounted skeleton.

By Exchange:

Godthaab Seminarium, Godthaab, Greenland: 36 Greenland bird skins.
 California Academy of Natural Sciences, San Francisco, California: 44 bird skins, six Canada geese, *Branta canadensis*, 32 shearwaters, *Puffinus* of four species, and eight Pacific Coast quail of three species.

NATIONAL HERBARIUM

A. E. Porsild continued on loan to the Department of External Affairs and from July 9 to December 26, 1941 was stationed in Greenland as Canadian Consul. Following his return he was able to work part time in the National Herbarium, when considerable progress was made on his reports on the flora of western Arctic Canada including descriptions of several new species and varieties of northern plants. During the year he answered 181 letters and memoranda dealing with requests for botanical information and many specimens of plants sent in from different sources were identified.

Miss H. T. Harkness, Herbarium Assistant, continued labelling, mounting, and inserting herbarium sheets in the permanent collection. Altogether, 1,855 sheets were mounted and several thousands were labelled. The mounted sheets increased the number of listed specimens in the National Herbarium to 162,281, not including several thousands not yet determined and mounted. Considerable time was spent in arranging sets of duplicates for distribution and in checking the collections against insect pests. The Gray Herbarium Card Index was brought up to date by the insertion of the last five series issued. Visitors consulting the herbarium collections numbered 86.

Professor Thomas M. C. Taylor, Department of Botany, University of Toronto, continued work on a report on the flora of the north shore of Lake Superior, to cover the systematic work of four seasons' botanical work during the summers from 1936 to 1939 inclusive at various stations from Thunder Bay to Heron Bay, Ont.

Accessions

<i>Plants received on account of exchange</i>	1,537
British Columbia Dept. of Agriculture, Vancouver.....	57
Catholic University, Washington, D.C.....	312
Colorado Experiment Station, Fort Collins.....	50
Gray Herbarium, Harvard University, Cambridge, Mass.....	192
University of Montreal, Montreal, Que.....	63
M. P. Porsild, Godhavn, Greenland	123
Stanford University, Dudley Herbarium, Stanford, Calif.....	215
Utah State Agriculture College, Logan, Utah.....	525
<i>Plants received as donations</i>	191
Dr. H. S. Bostock, Dept. Mines and Resources, Ottawa.....	89
Dr. C. H. D. Clarke, Dept. Mines and Resources, Ottawa.....	100
Dr. H. F. Lewis, Dept. Mines and Resources, Ottawa.....	1
Mr. H. Mousley, Montreal, Que.....	1
<i>Plants sent on account of exchange</i>	2,783
British Columbia Dept. of Agriculture, Vancouver.....	43
Colorado Experiment Station, Fort Collins.....	60
Gray Herbarium, Harvard University, Cambridge, Mass.....	1,105
University of Montreal, Montreal, Que.....	451
M. P. Porsild, Godhavn, Greenland.....	26
Iowa State College, Ames, Iowa.....	713
United States National Museum, Washington, D.C.....	352
Utah State Agriculture College, Logan, Utah.....	33

<i>Plants lent</i>		866
Dalhousie University, Halifax, N.S.....	85	
University of Colorado Museum, Boulder, Col.....	189	
University of Michigan, Ann Arbor, Mich.....	131	
University of Montreal, Montreal, Que.....	3	
M. P. Porsild, Godhavn, Greenland.....	262	
Arnold Arboretum, Harvard Univ., Jamaica Plain, Mass.....	196	
<i>Plants borrowed</i>		60
Colorado Agriculture College, Fort Collins.....	30	
Philadelphia Academy of Sciences, Philadelphia.....	30	

EDUCATIONAL WORK

In addition to its scientific research and related activities, the National Museum carries on educational work designed to give information and assistance to persons interested in anthropology, biology, and other phases of the natural history of Canada. This information and assistance is provided through the medium of correspondence, publications, and visual aids, as well as through personal use of the facilities of the Museum at Ottawa.

Much time was given to the selection of photographs to illustrate scientific journals, school textbooks, and newspaper articles. Particular attention was given to the lending of motion pictures and lantern slides. According to records kept of these loans, these films and slides were seen by 188,808 persons during the year. Four new motion pictures were added to the Museum film library.

More than 150,000 persons visited the halls of the Museum, and, in addition, many thousands of junior and senior school pupils came in organized class study groups. These class study groups were given special assistance and the personal attention of members of the staff. One such study group had a total attendance of 6,150.

During the year organized groups of tourists, advanced students, and student teachers were provided with guides qualified to describe and discuss the various exhibits.

LECTURES

As part of its service to the public, the Museum organizes each year a program of lectures and motion pictures related to its activities, and to Canada's part in the world conflict. These lectures were given to adults on Wednesday evenings and, suitably adapted, to children on Saturday mornings. Four series were given during the year. The subjects were:

The British Commonwealth at War (Motion Pictures).

Canada and Its People (Motion Pictures).

Here and There in the World (Motion Pictures).

North American Neighbours (Motion Pictures).

War Time Communications. By George Long, Bell Telephone Company of Canada, Montreal.

The War of Metals. By G. C. Monture, B.Sc., Dept. of Mines and Resources, Ottawa.

Our Sunset Province. By J. M. Humphrey, Vancouver.

Australia. By R. R. Ellen, Assistant Australian Trade Commissioner, Toronto.
Australia (Motion Pictures), shown in co-operation with the National Gallery and
the National Film Society.

Canada's Army—Manpower Plus Machines. By Lt.-Col. W. W. Goforth,
Headquarters Staff, Dept. of National Defence, Ottawa.

Motion Pictures in Colour. By F. R. Crawley, Ottawa.

Battle of the Airways. By Hartley Hunter, Canadian Westinghouse Limited,
Hamilton.

Down Where the North Begins. By Charles Clay, Ottawa.

Pilots of Tomorrow—Quest for Wings. By Wing Commander K. B. Conn, D.F.C.,
Headquarters Staff, Royal Canadian Air Force, Ottawa.

The East Indies and New Guinea. By A. L. Rand, Ph.D., National Museum of
Canada, Ottawa.

Greenland. By A. E. Porsild, National Museum of Canada, Ottawa.

The total attendance at the children's Saturday morning lectures was
12,050 and at the Wednesday evening lectures for adults was 9,475.

LECTURE HALL

The lecture hall of the National Museum has a seating capacity of 598,
and is equipped with motion picture projectors and a projection lantern.
During the year, in addition to its use for Museum Lectures, there were
126 reservations of the hall by scientific or educational organizations. A
total of 17,700 persons attended these meetings.

**NATIONAL MUSEUM OF CANADA
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ANTHROPOLOGICAL DIVISION

D. Jenness, Chief of the Division, was on loan to the Royal Canadian Air Force, but he maintained sufficient connection with the Division to answer a few anthropological inquiries and to be available for consultation.

C. M. Barbeau continued the preparation of an extensive, illustrated monograph entitled "Haida Carvings in Argillite". He helped in the preparation of an evening of folk-songs and handicrafts called "Bal chez Boulé" given in Quebec, and three lectures on Canadian folk-songs given at Laval University; prepared three programs of folk-songs and dances for the Tercentenary Celebration in Montreal; and organized a program of Canadian music for a meeting of the Canadian Authors' Association. Mr. Barbeau devoted a period of field work to the study of the ancient records of the Ursulines, Quebec, the Hotel-Dieu, Montreal; the Iberville potters of the past hundred years; and to the taking of about 200 photographs, mostly of old specimens of Canadian handicrafts.

He delivered a series of evening lectures on North American geography to post-graduate students at the University of Ottawa, and he collaborated with scholars and writers outside the Museum on the following projects: with Mlle Rina Lasnier on a book on *Canadian Madonnas*, illustrated; with Mlle Jeanne Bélanger, on the study of prosody and verse in Canadian folk-songs; with Miss Joy Tranter, on a book of Canadian round dances; with Professor Médard Carrière, on French-Canadian linguistics.

He rendered some assistance also in the following: Mr. Langdon Kihn's pictorial survey of the North Pacific Coast for the National Geographic Society; a government sponsored exhibition of handicrafts in New York; a project for the advancement of folk arts in Canada; the work of Mlle Clarisse Cardin in preparing his full bibliography since 1913; the preparation of two theses, on Quebec wood carving and old silver, by Miss

Claudine Lutz and Miss Anne Richardson, of Barnard College, New York; and the arrangements for a Canadian ethno-botanical issue of *The Journal of American Folk-lore*.

Mr. Barbeau published three books in the course of the year: *Maîtres artisans de chez nous* (Achard, Montreal); *The Indian Speaks* (Caxton Printers, U.S., and Macmillan Company of Canada); and *Les rêves des chasseurs* (Beauchemin, Montreal). A fourth book, *Alaska Beckons*, he expects to complete in about a month. One of his early works, *Downfall of Temlahan*, will be issued shortly in French under the title *Le Rêve de Kamalmouk*.

In the course of the year Mr. Barbeau increased the folk-lore collections as follows: 109 song texts, of which 43 were recorded on a phonograph; miscellaneous folk-lore items, photographs, data on old silver, etc.

Douglas Leechman continued his study of Arctic archæology, particularly of the Cape Dorset Eskimo culture; he made detailed studies of certain elements in that culture, such as adze heads, curved knives, boot creasers, and harpoon foreshafts; two local field trips were undertaken; one to two sites on the Gatineau River which were already known; and one to a newly discovered site a few miles west of Ottawa on Lake Deschenes. He handled a large number of inquiries from correspondents and visitors, added considerable material to the archæological files, and compiled an annotated and indexed list of plants used by the Canadian Indians as sources of food. He presented before the Royal Society of Canada a paper entitled *Canadian Indian Art*; published an article on *A New Type of Adze Head* in the *American Anthropologist* and prepared a second article, *Some Wooden Tubes from Oregon*, for publication in the journal of *American Antiquity*. He also prepared a paper on *The Geographical Distribution of Aboriginal Pottery in Canada* by the late W. J. Wintemberg.

W. G. Roberts arranged several temporary exhibits in the entrance hall, checked and repaired many specimens in the study collections, and inspected all the storage cases monthly to guard against insect depredations. He also kept in repair and packed for shipping the motion picture films in the museum's loan collection.

Accessions

BY DONATION:

J. W. Hughson:

Archæological material from Gens-de-terre River, Que.

E. B. Ashley:

Copper implement from Hastings county, Ont.

E. J. Boag:

Specimens from the west coast of Africa.

Mrs. C. L. Worsley:

Bead work from the prairies.

T. F. McIlwraith:

Cast of a stone club from British Columbia.

D. L. McKeand:

Archæological material from the Arctic.

A. Copeland:

Archæological material from the Arctic.

Publications

Jeanne Le Ber, Sainte artisane. By Marius Barbeau. Almanach du Peuple, Librairie Beauchemin Limitée, Montreal, Que., 1942.

Les rêves des chasseurs. By Marius Barbeau. Editions Beauchemin, Montreal, 1942.

Louisiana French Folk Songs. By Marius Barbeau (Review). Jour. Am. Folk-lore Society, Philadelphia. Jan.-June, 1942.

Asiatic survivals in Indian songs. By Marius Barbeau. The Scientific Monthly. April 1942.

Maîtres artisans de chez nous. By Marius Barbeau. Les Editions du Zodiaque. April 1942.

A quoi bon les arts? By Marius Barbeau. Revue de l'Université d'Ottawa. April-June 1942.

Notre géographic en peinture. By Marius Barbeau. Bulletin des Sociétés de Géographie de Québec et de Montréal. May 1942.

The Hooked Rug—Its Origin. By Marius Barbeau. Technique, Industrial Review, Montreal. June 1942.

Voyageur Songs. By Marius Barbeau. The Beaver (Hudson's Bay Company). June 1942.

Old Canadian Silver. By Marius Barbeau. The Educational Record of the province of Quebec. July-September 1942.

Nos arts populaires. By Marius Barbeau. Le Canada français. Quebec. September 1942.

Côté, sculpteur. By Marius Barbeau. Le Canada français. Quebec. October 1942.

L'île d'Orléans. Marius Barbeau. Queen's Quarterly. Winter 1942-43.

Indian Trade Silver. By Marius Barbeau. The Beaver (Hudson's Bay Company). December 1942.

Totem Poles—a By-product of the Fur Trade. By Marius Barbeau. The Scientific Monthly. December 1942.

The Indian Speaks. By Marius Barbeau and Grace Melvin. The Caxton Printers Ltd., Caldwell, Idaho, and The Macmillan Company of Canada Ltd., Toronto, 1943.

Côté, the Woodcarver. By Marius Barbeau. The Ryerson Press, Toronto, 1943.

French Canadian Folk-songs. By Marius Barbeau. The Musical Quarterly. January 1943.

Saguenay Pioneers Made History. By Marius Barbeau. Family Herald and Weekly Star. January 6, 1943.

Folk-songs of French Canada. By Marius Barbeau. The Educational Record of the province of Quebec. January-March 1943.

Mes délices et mes amours—(une chanson). By Marius Barbeau. La Revue moderne, Montreal. February 1943.

La rose blanche. By Marius Barbeau. La Revue moderne, Montreal. March 1943.

The Picture Gallery of Canadian History. By Charles W. Jeffreys. By Marius Barbeau (review). The Canadian Historical Review. March 1943.

Ceintures fléchées. By Marius Barbeau. Technique. March 1943.

Lectures

By Marius Barbeau:

A series of 26 weekly evening lectures on North American geography, given at the Ottawa University. 1942.

A series of 3 addresses on French Canadian folk-songs given during the summer course at Laval University. August 1942.

Series of 30 lectures on human geography given at the Ottawa University. October 1942.

A series of lectures on human geography, given at the Ottawa University, entitled: Human Labour Activities; The Family; Government. January 1943.

A series of lectures on human geography, given at the Ottawa University, entitled: Currency or Medium of Exchange; Wars Among the Natives or of the White people; Colonization; Progress of Agriculture. February 1943.

Papers and Addresses

By Douglas Leechman:

Fallacies in teaching lessons on the Indians of Canada. Separate School Teachers' Association. April 24, 1942.

Canadian Indian Art; Royal Society of Canada. May 29, 1942.

Anthropology Today; St. Patrick's College, summer school. July 20, 1942.

Fallacies concerning the American Indian; Chalmers' Church, Ottawa. February 1, 1943.

The Library and the Anthropologist; McGill Library School. March 27, 1943.

Harlan Ingersoll Smith, 1872-1940; Canadian Field-Nat. 56:114. October 1942.

A New Type of Adze Head; Am. Anthropologist 45:153-155. January 1943.

BIOLOGICAL DIVISION

R. M. Anderson, Chief of the Division, made progress in the revision of Canadian mammal species and subspecies in the collection. Some nomenclatural changes were made to bring the collections in line with such recent studies on mammals of North America and of the world as appear to be sound as far as they apply to Canadian forms. Five new subspecies were described and three apparently valid forms were revived and added to the Canadian list, and some other forms, apparently described on insufficient evidence, were dropped. Descriptions of several new races were written and approved, but were not published. The present range or geographical distribution of a large number of Canadian forms was rewritten on the basis of recent studies and the location of most of the type specimens of Canadian mammal forms, most of which are in museums in other countries, was listed for inclusion in a Canadian check-list.

Considerable numbers of mammal specimens were determined, references verified, and additional data supplied for preliminary reports on the faunas of several of the National Parks in Alberta, Saskatchewan, and Manitoba.

The difficulty of obtaining needed specimens from Canadian localities that are not adequately represented in the National Museum of Canada was met to some extent by co-operation between public museums in Canada and the United States. Series of specimens that were needed for study were obtained on loan from the Royal Ontario Museum of Zoology, Toronto; the British Columbia Museum of Natural History, Victoria; the Carnegie Museum, Pittsburgh; the Museum of Natural History, University of Iowa, Iowa City; the American Museum of Natural History, New York; and from J. Dewey Soper, Winnipeg; Stuart Criddle, Treesbank, Man.; Allan Cyril Brooks, Okanagan Landing, B.C.

Aside from a limited amount of local work, no field program was undertaken. One hundred and thirty-six specimens were added to the

mammal collections during the year, as compared with forty-eight during the preceding year. On March 31, 1943, the catalogued collection of mammals totalled 17,282 specimens.

Clyde L. Patch determined and catalogued such amphibians and reptiles as were sent in. He assembled a labelled public display of amphibians and reptiles. Several of the small exhibit groups in the Museum were assembled, rearranged, and cleaned, and some replacements were made in the School Loan Collection. With the assistance of Miss W. K. Bentley he draughted and painted a 10- by 5-foot wall map of Canada showing natural faunal areas and selected specimens of birds, mammals, plants, etc. These are pinned to the map and may be changed from time to time for the benefit of the public. The first exhibit consisted of 43 small mammals of Canada.

Claude E. Johnson was engaged largely in detail work for the Division of Vertebrate Palaeontology, preparing a panoramic background for a fossil tree exhibit in the Museum Hall. In addition, he numbered and stamped 1,712 skins and skulls; made 9 line drawings, range maps, and signs; and coloured 182 lantern slides.

D. J. Blakely and J. E. Perron were engaged in the systematic preparation of bird and mammal skins and skulls for exhibition and study purposes.

Lecture

Clyde L. Patch, "Plants and Birds", Y.M.C.A. Boy's Club, Ottawa, July 23.

Accessions

MAMMALS

By Gift:

P. Brown, Game Warden in charge Vanderhoof district, B.C.: One skull of British Columbia timber wolf (*Canis lupus columbianus*); four skulls of beaver (*Castor canadensis*).

Frith's Greenhouse, Ottawa: One star-nosed mole, in the flesh.

George Magrum, Resolution, Mackenzie district, N.W.T.: One skull Hudson Bay tundra wolf (*Canis lupus hudsonicus*); one skull wolverine (*Gulo luscus*); one skull Arctic fox (*Alopex lagopus innuitus*); one skull cross fox (*Vulpes fulva*); one skull Keewatin mink (*Mustela vison lacustris*); one skull Richardson weasel (*Mustela cicognanii richardsoni*), all from Back River; two skulls beaver (*Castor canadensis*); one skull mink, from Little Buffalo River, N.W.T.

Ronald W. Smith, R.C.A.F.: One skin with skull, topotype of maritime saddle-backed shrew (*Sorex arcticus maritimensis*), R. W. Smith, collected at Wolfville, Kings county, N.S., December 30, 1939.

Mrs. J. G. Cameron, Ottawa, Ont.: One big brown bat (*Eptesicus fuscus*), in the flesh.

Mrs. Hoyes Lloyd, Rockcliffe Park, Ont.: One cotton-tail rabbit (*Sylvilagus floridanus mearnsi*), juvenile, in the flesh; one white-footed mouse (*Peromyscus* sp.), alive.

Northwest Territories Administration, Lands, Parks and Forests Branch, Dept. of Mines and Resources, Ottawa: One domestic reindeer (*Rangifer* sp.), female, skin with skull; one reindeer steer, skull only, antlers in velvet, from Reindeer Station, Tuktak, N.W.T.; one International Boundary grizzly (*Ursus internationalis*), male, skin and skull, from Richards Island.

Allan C. Brooks, Okanagan Landing, B.C.: 3 pocket gophers (*Thomomys talpoides*), skins and skulls.

A. LaRoeque, Bureau of Geology and Topography, Ottawa: One little brown bat (*Myotis lucifugus lucifugus*), in the flesh.

T. H. Manning, R.C.N.V.R., Montreal: One skin with skull of Baffin Island wolf (*Canis lupus manningi*), topotype, from Hantzsch River, Baffin Island, east side of Foxe Basin.

American Museum of Natural History, New York City: Six specimens of spiny rat (*Proechimys o'connelli*), taken at Villa Vicencio, Colombia, South America; dried specimens from pickled series.

Dr. R. T. D. Wickenden, Bureau of Geology and Topography, Ottawa: 1 skull of northern white-tailed deer (*Odocoileus virginianus*), young, taken 12 miles west of Calabogie, Ont.; 1 skull of red fox, female, about 2 miles east of Hawthorne, Ont.

Harold B. Hitchcock, Dept. of Zoology and Applied Biology, Univ. of Western Ontario, London: 1 hoary bat (*Lasiurus cinereus*), collected on Southampton Island, Hudson Bay, June 17, 1942, and presented by the Hudson's Bay Company; 1 pipistrelle bat (*Pipistrellus subflavus obscurus*), and 2 big-eared brown bats (*Myotis lucifugus septentrionalis*), found hibernating in LaFleche Cave, Gatineau county, Quebec, December 19, 1942; *P. s. obscurus*, 6 *M. k. septentrionalis*, and 6 eastern masked bats (*Myotis subulatus leibii*), found hibernating in cave at Fourth Chute, Bonnechère River, Renfrew county, about 70 miles west of Ottawa, January 6, 1943.

H. J. Lackey, Ottawa: 1 northern grey squirrel (*Sciurus carolinensis leucotis*), in the flesh.

Dr. Douglas Leechman, Division of Anthropology, National Museum, Ottawa: 1 big brown bat (*Eptesicus fuscus*), in the flesh.

Dr. C. H. D. Clarke, National Parks Bureau, Ottawa: 1 skull of northern white-tailed deer (*Odocoileus virginianus borealis*), from Black Donald, Renfrew county, Ont.

National Parks Bureau, Lands, Parks and Forests Branch, Department of Mines and Resources, Ottawa: 1 skull of Saskatchewan timber wolf (*Canis lupus griseus*), male, shot at Riding Mountain National Park, Man., in January 1943.

By Exchange:

Professor E. H. Herrick, Dept. of Zoology, Kansas State College, Manhattan, Kansas: 18 small mammals (opossum, woodchuck, black-tailed jack-rabbit, spotted skunk, fox squirrel, Mississippi valley pocket gopher, Richardson kangaroo rat, Bailey woodrat, Wyoming ground squirrel, striped ground squirrel, Kansas pocket mouse, woodland pine mouse, white-footed mice).

By Staff:

Dr. R. M. Anderson and A. L. Rand: 33 mammals, Gatineau Valley, Que.; C. L. Patch: 2 mammals, Ottawa; 9 from Gatineau Valley, Que.

FISHES

By Gift:

H. M. Peachy, Ottawa: 1 garpike, Britannia Bay, Ottawa River, Aug. 24, 1942.

INVERTEBRATES

By Gift:

M. Pierre Michaud, Temiscouata, Que.: 1 six-rayed starfish, probably *Asterias polaris*, dried specimen.

ORNITHOLOGICAL DIVISION

Although operating under wartime restrictions on space, personnel, and funds, the staff of the Division carried on routine, research, and some educational work.

P. A. Taverner retired in June after more than 30 years of service in the National Museum. During this period he carried out extensive investigations in the field and studies in the office on the birds of Canada, and was instrumental in building up the ornithological collections of the National Museum to their present high standard of quality and completeness. Prior to his retirement, Mr. Taverner continued the preparation of his Manual of the Water and Game Birds of Canada. Apart from this, the main research activities of the Division were a study of the recent bird collections from British Columbia; work in bringing Macoun's Catalogue of Canadian Birds (1909) up to date; work on a Naturalists' Guide to Canada, and on a general treatise on bird behaviour; taxonomic reviews of various groups of Canadian birds, and an inquiry as to the status of the Hungarian partridge in the Ottawa-Montreal area. Various short papers incidental to these studies were prepared, including two papers on birds of the Mackenzie district by A. E. Porsild.

A. L. Rand prepared reports for the United States Government on aspects of Madagascar and New Guinea affecting current military activities. He also prepared a survey of bird life in parts of Polynesia for incorporation in a booklet for the United States Army, to be edited by the International Committee of Wildlife.

Four cases of birds were made available for the study groups of local schools; lectures and study groups were conducted and manuscripts were prepared for pamphlets intended for general circulation, on "Some Familiar Canadian Birds", and on "Canadian Bird Life". These pamphlets are designed to meet the many requests received for information about birds. Ten press releases were prepared.

Lectures

By A. L. Rand:

The East Indies and New Guinea; Nat. Mus. of Canada, April 8.
 Some Aspects of Museum Functions; Macoun Group, Ottawa, April 7.
 A Naturalist in New Guinea; Ottawa Field-Naturalists' Club, Ottawa, November.
 Birds and Their Lives, seven study group periods conducted in St. Patrick's College
 for the Ottawa Field-Naturalists' Club in April, December, and January.

Publications

By A. L. Rand:

"*Larus kumlienii* and its Allies"; The Canadian Field-Naturalist, vol. 56, pp. 123-126, 1942.

By P. A. Taverner:

"Canadian Races of the Great Horned Owls"; The Auk, vol. 50, pp. 234-245, 1942.
 "The Sense of Smell in Birds"; The Auk, vol. 50, pp. 462-463, 1942.

Accessions

BIRDS

By Gift:

Royal Canadian Mounted Police, Perry River, on Arctic Circle, N.W.T.: One blue goose and one gosling.

Royal Canadian Mounted Police, Ottawa, Ont.: One northern yellow-throat, found dead.

A. E. Bourguignon, Lake Deschenes, Ottawa, Ont.; one red-backed sandpiper.

Mr. Lockhard, Ottawa, Ont.: One warbling vireo, in the flesh.

Royal Canadian Mounted Police, Hudson Bay: One wood duck, one meadow-lark.

Telesphore Marcoux, Whale Head, Saguenay county, Que.: one greater shearwater.

L. de K. Lawrence, Rutherglen, Ont.: One fox sparrow, in the flesh.

E. V. Goodwill, Notre Dame de Pierreville, Que.: One gannet, in the flesh.

Mrs. J. A. Fraser, Cookshire, Que.: One evening grosbeak, in the flesh.

E. F. Pullen, Alexo, Alta.: 1 pygmy owl, in the flesh.

A. L. Gormley, Haley's Station, Renfrew county, Ont.: One hawk owl, in the flesh.

A. L. Killaly, about 10 miles south of Stony Lake, Ont.: One double-crested cormorant, in the flesh.

J. P. Turner, Ottawa: One ruffed grouse, caught by dog.

Dr. C. H. D. Clarke, Ottawa, Ont.: One Hudsonian chickadee; one Alaska chickadee; one Sabine's gull.

P. L. Lukis, Choisy, Que.: One grey partridge, in the flesh.

Wayne Robinson, Ottawa, Ont.: One sharp-shinned hawk, in the flesh.

R. W. Tufts, Wolfville, N.S.: One loon, one dovekie, in the flesh.

E. G. Bunel, Ottawa, Ont.: One snowy owl, in the flesh.

Mrs. Karsh, Ottawa, Ont.: One grouse, in the flesh.

L. J. Sylvestre, Vankleek Hill, Ont.: Two Hungarian partridge.

John W. Slipp, Seattle, Wash., U.S.A.: One great horned owl.

By Staff:

Museum Biological Division: One winter wren, two hermit thrush, one long-eared owl, in the flesh, from Blue Sea Lake region, Gatineau county, Que.

NATIONAL HERBARIUM

A. E. Porsild was on duty in the National Herbarium from the beginning of the fiscal year until July 5, 1942. He spent considerable time completing a paper entitled "Material for a Flora of the Continental Northwest Territories of Canada", in which he described 18 new species and several new varieties and recorded many species that had not been known to occur in the region. This work is particularly important in connection with recent developments in the North Pacific Planning Project. The manuscript was submitted for publication before he left to take up special duties under the Department of External Affairs as Canadian Consul at Godthaab, Greenland. His duties in Greenland allowed him a limited amount of time to make botanical collections and to obtain a number of mammals and birds and some specimens of ethnological interest. Before leaving Ottawa he determined 221 plants for the British Columbia Provincial Museum, Victoria. Permission was granted the United States War Department to reprint, in whole or in part, his booklet "Edible Plants and Berries of Northern Canada".

Miss H. T. Harkness, Herbarium Assistant, mounted 2,409 herbarium sheets, thus increasing the number of listed specimens in the National

Herbarium to 164,690. She rearranged the European herbarium making more room for the collection and indexed over 50 types and isotypes in the National Herbarium.

Lectures

By A. E. Porsild:

Reindeer and Caribou Grazing; Seventh North American Wildlife Conference,
Toronto, April 10.
Greenland; University of Toronto, Toronto, April 10.

Accessions

<i>Plants received on account of exchange.....</i>	2,351
Arnold Arboretum, Jamaica Plain, Mass.	599
B.C. Dept. of Agriculture, Vancouver, B.C.	10
University of California, Berkeley, Calif.	265
Catholic University, Washington, D.C.	37
Mr. Ira W. Clokey, South Pasadena, Calif.	120
Iowa State College, Ames, Iowa	1,142
Provincial Museum, Victoria, B.C.	61
University of Saskatchewan, Saskatoon, Sask.	107
<i>Plants received as donations.....</i>	235
J. Carroll, Topographical Survey, Ottawa	51
Wm. Dore, Dalhousie University, Halifax, N.S.	57
Dr. C. Heimburger, Dept. of Mines and Resources, Ottawa....	3
Dr. H. F. Lewis, Dept. of Mines and Resources, Ottawa	1
Dr. Olga Lakela, Duluth, Minn.	1
J. A. Munro, Okanagan Landing, B.C.	76
University of Maine, Orono, Maine	21
Mrs. L. Planta, Nanaimo, B.C.	1
Miss E. Scamman, Gray Herbarium, Cambridge, Mass.	24
<i>Plants sent on account of exchange.....</i>	2,380
Catholic University, Washington, D.C.	325
Mr. Ira W. Clokey, South Pasadena, Calif.	418
Gray Herbarium, Harvard University, Cambridge, Mass.	650
University of Montreal, Montreal, Que.	495
Stanford University, Dudley Herbarium, Calif.	268
Utah State Agricultural College, Logan, Utah	224
<i>Plants lent</i>	901
McMaster University, Hamilton, Ont.	46
Gray Herbarium, Harvard University, Cambridge, Mass.	100
University of California, Berkeley, Calif.	105
University of Michigan, Ann Arbor, Mich.	73
University of Montreal, Montreal, Que.	24
Dr. H. M. Raup, Arnold Arboretum, Jamaica Plain, Mass.	553

EDUCATIONAL WORK

This report covers the activities of an important year in the history of the National Museum, for 100 years ago what is now the National Museum of Canada began as the Museum of the Geological Survey, in a warehouse room in Montreal.

Despite limitations, such as the closing of two-thirds of the exhibition space of the National Museum for the duration of the war, educational

work was continued as extensively as these restricted facilities would permit. Enough space was provided in front of the larger habitat groups to permit students and organized groups from the armed forces to see and study them. For class study groups, one of which had a total attendance of 6,792, exhibits of small mammals were arranged, and exhibits of birds were specially prepared to meet school curricula. The rearrangement of the Dinosaur Hall, the only hall fully open to the public, provides better facilities for seeing the exhibits and more space for study groups. Members of the scientific staff of the National Museum gave splendid co-operation in arranging the educational exhibits and in conducting study groups through sections of the exhibition halls not now open to the general public.

Though gasoline and rubber restrictions have affected all museum attendance, more than 136,200 persons visited the sections of the National Museum still open to the public, and in addition many thousands of junior and senior school pupils came in organized study groups. Other Museum activities were attended by 44,546 persons, making a total attendance of 180,746 for the year.

Information and assistance was given to persons interested in anthropology, biology, and other phases of the natural history of Canada, through the medium of correspondence, publications, and visual aids. Much time was also given to the identification of specimens, the loan of material, and the selection of photographs to illustrate scientific journals, school textbooks, and magazine and newspaper articles. Particular attention was given to the loan of motion pictures and lantern slides to Canadian educational institutions and other museums. Three new motion pictures and two lantern slide sets were added to the Museum loan collection in addition to replacements of material too worn to be of further use. According to the loan records, these films and slides were seen by 129,292 persons during the year. These figures are lower than those for a number of preceding years, due to transportation difficulties of the past winter occasioned by the abnormal snow fall. A great many of the institutions using this material are in outlying centres and in rural districts. As formerly, the systematic and study collections of the Museum were made available to visiting scientists and students.

LECTURES

The National Museum, like many other museums, has established lecture series illustrated with lantern slides and motion pictures, and programs of motion pictures. The film presentations have become one of the most vigorous features of its entire program. The lecture hall is equipped with projectors for showing both 35 mm. and 16 mm. films, sound and silent, which enables the Lecture Committee to take advantage of the great number of educational films now being made available. All film programs of popular science, travel, or documentary subjects, including those showing Canada's part in the present war, as well as that of the Allied Nations, are shown to enthusiastic, capacity audiences. The coloured lantern slides are still valuable for illustrative and educational purposes, but the popularity of the motion picture gives it front rank as an educational medium.

The Lecture Committee presented during the year, in addition to the three series of regular programs, four motion picture programs designed

to give free entertainment to lower paid civil servants in war-time departments and to men and women in uniform. The regular series was given on Saturday mornings to audiences of children, and to adults on Wednesday evenings. The special war-time program was given on Wednesday evenings only, and the excellent attendance showed the need for entertainment of this sort for these groups. The subjects of the regular Museum lecture series were:

Leaders of Tomorrow's Battles. By Colonel M. F. Gregg, V.C., M.C., Brockville, Ont.

The 400,000,000 (China at War). (Motion Picture.)

Electricity in Modern Warfare. By G. E. Bourne, B.Sc., Canadian General Electric Company, Toronto, Ont.

Art of Children. By Miss Mabel May, A.R.C.A., National Gallery of Canada, Ottawa.

Our Fighting Allies—United States and Russia. (Motion Pictures.)

Our Fighting Empire (Motion Pictures).

The Inland Road to Tokyo. By H. H. Beach, Ph.D., Geological Survey, Ottawa.

The Film at War. By Stuart Legg, National Film Board, Ottawa.

Across Africa from Dakar. By Laura Boulton, National Film Board, Ottawa.

Cuba, Pearl of the Antilles. By Mario C. J. Harrington, Staff of the Chilean Legation, Ottawa.

From Yesterday to You. By C. M. Sternberg, Geological Survey, Ottawa.

Background for Tomorrow (Motion Picture).

One Hundred Years of the Geological Survey, 1842-1942. By F. J. Alcock, Ph.D., F.R.S.C., Geological Survey, Ottawa.

In concluding its lecture series with the lecture, "One Hundred Years of the Geological Survey, 1842-1942", by Dr. F. J. Alcock, the National Museum had the honour and pleasure of presenting the One Hundredth Anniversary lecture of its parent institution, the Geological Survey. The National Museum originated in and developed with the Geological Survey, and in celebrating the centenary of that institution it also commemorated its own founding in Montreal 100 years ago. A motion picture in colour, "The Face of Time", on the history and work of the Geological Survey, shown at the conclusion of the lecture, was produced by the National Film Board to mark this centenary year.

Special exhibits placed in the rotunda included material dating back to the time of Sir William Logan, the first Director of the Geological Survey. Among the exhibits were the Logan medals; the Logan geological map of Canada, 1866; instruments used by Logan and other early explorers, and early accessions to the Museum natural history collections. Present in the audience were Dr. E. R. Faribault and Mr. E. D. Ingall, appointed to the staff in 1882 and 1884 respectively, as well as relatives of former Directors.

The motion picture programs for junior civil servants and men and women in uniform included:

Convoy, Ships with Wings, Bring 'Em Back Alive, and a program of documentary, travel and nature study films.

The total attendance of children on Saturday mornings was 10,213 and at the Wednesday evening presentations for adults was 9,705.

LECTURE HALL

The lecture hall of the National Museum has a seating capacity of 598 and is equipped with motion picture projectors and a projection lantern. During the year, in addition to its use by the National Museum, there were 122 reservations of the hall by scientific or educational organizations. A total of 24,628 persons attended these meetings.

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ANTHROPOLOGICAL DIVISION

D. Jenness, Chief of the Division, continued on loan to the Royal Canadian Air Force. He maintained connection with the work of his Division and, in addition to dealing with some inquiries, correspondence, and related matters, prepared for publication Volume XV, Part B, of the Canadian Arctic Expedition 1913-1918, on Grammatical Notes on Some Western Eskimo Dialects.

Marius Barbeau completed the preparation of a book entitled "Alaska Beckons" on the ancient Siberian migrations into Alaska and the Northwest; he finished other books bearing on his museum activities: "From Chaos to Utopia" (on early events on the North Pacific Coast); "Saintes artisanes, I, Les brodeuses; II, Mille petites adresses" (on Canadian embroidery and handicrafts); "Madones canadiennes", and "Roundlays—Chansons à la ronde!" (the last two in collaboration). During the year, four of his books were published: "Les enfants disent", "Saintes artisanes I", "Côté, The Wood Carver", and "Mountain Cloud". Short periods of field work enabled him to study records in monasteries, and to take about 200 photographs. His services were lent to the National Film Board for the preparation of a film on French-Canadian painters. At the request of the Wartime Information Board, he contributed 15 folk-songs for publication in the United States. Ten other folk-songs were furnished to the Department of Naval Services (War), also for publication. His series of lectures on North American human geography was completed at the University of Ottawa. The two opening lectures on Canadian handicrafts were given at Laval University, Quebec, in the summer series. He revised two manuscripts on French-Canadian and Iroquoian songs. Numerous items were added by him to the museum collections; over 60 folk-songs were recorded; an 1820 manuscript of fiddle dances of Ontario was reproduced by photostat; a large number of food and medicinal recipes were collected; also

chronicles of the past in the Lake St. John district; 140 photos, mostly of Indian life, were collected; about 75 records were made of old Canadian silver. More than a score of lectures were given and papers published.

Douglas Leechman continued his study of the Cape Dorset Eskimo culture and its relationship to other circumpolar cultures. He noted that two distinct cultural groups exist, one consisting of cultures making stone implements almost exclusively by the flaking and chipping of flint-like materials, whereas the other group preferred implements made by rubbing and grinding blades and points of slate. He spent some time during the summer examining marine beaches of the Champlain Sea in the Ottawa district, some of which appear to have been inhabited, soon after their formation, by an Eskimo-like people using ground slate implements. He served on an interdepartmental committee on Arts and Crafts; and also prepared certain sections of a manual for the use of aviators and others forced to rely upon their own resources in uninhabited areas. He made numerous additions to the large Archaeological File, which now contains several hundreds of thousands of references, and continued the compilation of a complete Bibliography of the Archaeology of Canada. He examined and reported upon a considerable number of archaeological specimens and answered inquiries, both in interviews and by correspondence, on a great variety of questions. He supervised the maintenance and preservation of the study collections in archaeology, ethnology, and physical anthropology. He published a book on "Vegetable Dyes" and papers on "Two New Cape Dorset Sites", "The Indian in Literature", "The Preservation of Fibre Cordage", and "The Uses of Birch Bark". He presented a paper on "The Use of Dentalium Shells as Currency" before the Royal Society of Canada.

Lectures and Papers

By Marius Barbeau:

Four lectures on North American human geography at the University of Ottawa:

"Naming in Geography and Among the People", April 1, 1943.

"How the World was Created", April 15, 1943.

"From the Concrete to the Universal, or the Reverse", April 16, 1943.

"Adaptation to New surroundings," April 29, 1943.

"Traditional Arts of Quebec"; in *Technique*, May 1943.

"Louis Jobin, statuaire"; a paper given at the Royal Society, annual meeting, May 25, 1943.

"Ancient Fur-trade Goods"; the Royal Society meeting, May 25, 1943.

"Caspeziades"; *Le Canada français*, June 1943.

"Arts populaires canadiens, professionnels"; lecture at Laval University, Quebec, July 6, 1943.

"Arts populaires canadiens, rustiques"; lecture at Laval University, July 7, 1943.

"The folklore movement in Canada"; in the *Jour. of Am. Folklore*, July-Sept. 1943.

"The Island of Orleans"; in the *Educational Record of the Province of Quebec*, Oct.-Dec. 1943.

"The Ancient Alaska Highway"; lecture at Luncheon Discussion Club, Ottawa, November 12, 1943.

"Saintes artisanes"; lecture at Institut Canadien, Ottawa, December 2, 1943.

"Fils d'or et d'argent"; in Chants du Ciel, Montreal, December 1943.

"From Gold Threads to Porcupine Quills"; in The Magazine Antiques, N.Y., January 1944.

"Ce que mangeaient nos ancêtres"; in Mémoires de la Société généalogique, Montreal, January 1944.

"Nos belles chansons populaires"; Radio-College's series on the CBC network, February 2, 1944.

"Totemism, a Modern Growth on the North Pacific Coast"; in the Jour. of Am. Folklore, January-March 1944.

"Les sources de notre folklore et de notre artisanat"; lecture at Cercle Universitaire, Montreal, February 9, 1944.

"Writers and Editors as I know Them"; lecture at Société des Ecrivains canadiens, Ottawa, February 14, 1944.

"Tobacco for the Fur Trade"; by Marius Barbeau and Clifford Wilson, in The Beaver, Winnipeg, March 1944.

"Canadian folk music"; lecture at the Y.W.C.A., Ottawa, March 12, 1944.

Papers and Addresses

By Douglas Leechman:

Two New Cape Dorset Sites; Am. Antiquity, April 1943.

The Use of the Tusk-shell as Currency; Royal Society of Canada, May 25, 1943.

The Uses of Birch-bark; The Beaver, June 1943.

The Indian in Literature; Queen's Quarterly, summer, 1943.

Review of "The Canadian Born in the United States"; Canadian Geog. Jour., August 1943.

"Cave Man" Tools; High School of Commerce, November 1, 1943.

Preservation of Fibre Cordage in Ethnological Objects; Museum News, March 1, 1944.

Further Light on Wooden Tubes from Oregon; Am. Antiquity, April 1944.

Accessions

FROM THE STAFF

Douglas Leechman:

Archæological specimens from Ottawa and district.

BY DONATION

Mrs. John Law:

African specimens from Kenya Colony.

Miss Helen Anderson:

Printed cotton handkerchief from James Bay area.
Ceinture fléchée from Quebec.

Alex Fraser:

Chipped stone implement from Kippewa, Que.

Chas. Macnamara:

Archæological specimens from Arnprior, Ont.

Dr. R. T. D. Wickenden:

Archæological specimens from Saskatchewan.

The Rev. L. Shaw:

Archæological specimens from Port Harrison, Que.

Dr. F. H. Gisborne:

Archæological specimens from the interior of Newfoundland.

A. E. Porsild:

Ethnological specimens from Greenland.

Allan Keefer:

Dog Rib Indian specimens from Fort Rae, N.W.T.

D. A. Nichols:

Archæological specimens from Fort Ross, N.W.T.

BIOLOGICAL DIVISION

R. M. Anderson, Chief of the Division, continued the revision of Canadian species and subspecies of mammals, and a number of additions and proposed nomenclatural changes were put on record in scientific publications. Fourteen types were added to the mammal collection of the National Museum, bringing the total number of type specimens of Canadian mammals to 31. Many mammals were determined, references verified, and additional data supplied for preliminary reports by the National Parks Bureau on the faunas of National Parks in Alberta, Saskatchewan, and Manitoba, and for other work of that Bureau.

The present range or geographical distribution of species and subspecies that are non-migratory or only slightly migratory had not been more than provisionally outlined because of the lack of sufficient authentic records. About three hundred of the forms were rewritten on the basis of recent studies for inclusion in a Canadian check-list. Much additional information was assembled on the location of Canadian types, most of which are in the museums and collections of other countries.

The difficulty of obtaining Canadian and other specimens needed for comparison in taxonomic research work was overcome to some extent by borrowing specimens from public museums and private individuals in Canada and the United States. The method was of particular value as conditions largely prevented visits to other institutions to study and examine material. Series of specimens were obtained on loan from the Academy of Natural Sciences, Philadelphia; American Museum of Natural History, New York; Carnegie Museum, Pittsburgh; Fish and Wildlife Service, Dept. of the Interior, Washington; Washington State Museum, Seattle; Manitoba Museum, Winnipeg; Stuart Cridle, Treesbank, Man.; Dr. D. A. Dery and Dr. Viger Plamondon, Quebec; Major R. H. Ozburn, R.C.A.M.C., Ottawa; and J. Dewey Soper, Winnipeg.

At the request of the Royal Canadian Army Medical Corps, a mimeographed pamphlet (Special Contribution 43-1), "A Synopsis of the Rodents of the Southern Parts of the Prairie Provinces", was prepared to assist the Corps in making a study of these rodents as hosts to certain parasites that are known to be carriers of disease to other animals and to human beings in some regions. Several of the host mammals were definitely determined at the National Museum at the end of the season. Supplementary to the above paper, an illustrated pamphlet (Special Contribution 43-2), "Instructions for Preserving Animal Specimens for Scientific Purposes", was prepared, giving simple practical information by which animal specimens can be prepared for identification purposes and for permanent reference. This information was in demand, not only by the Medical Corps, but also by naturalists, pathologists, farmers, trappers, and others interested in scientific or economic aspects of wild-life problems.

Two hundred and ninety-nine specimens were added to the mammal collections, bringing the catalogued collection up to 17,581 specimens.

A. L. Rand, Associate Zoologist, divided his time between work in the Biological and Ornithological Divisions. He investigated, with the assistance of the Division of Anthropology, the early history of the raccoon in Nova Scotia, and the distribution and variation of the common meadow mouse (*Microtus pennsylvanicus*), one of the most widely ranging species in Canada and at times of great economic importance. He commenced a survey of Canadian fur-bearers by preparing reports of those of Nova Scotia and on the fisher (*Martes pennanti*), Canada's rarest and most valuable fur-bearer; and during the summer he made a biological investigation of the southern part of the Alaska Highway between Dawson Creek, British Columbia, and Watson Lake, Yukon. During this investigation he obtained photographs, 116 small mammals, 149 birds, a number of amphibians and fishes, and a small collection of plants.

The importance of the developments in the North Pacific Planning Project focused attention on the Northwest, and a report on the southern part of the Alaska Highway and its mammals was published as a Museum Bulletin. A report on "Economic Aspects of the Wildlife of the Northwest", in which mammals are the most important, was prepared for the North Pacific Planning Committee. Various reports were prepared also for the Lands, Parks and Forests Branch of the Department of Mines and Resources. Available data on the mammals of Yukon were brought together to serve as a basis of future work.

Clyde L. Patch, Chief Taxidermist and Herpetologist, arranged four cases of woodpeckers and four cases of hawks for the use of 1,200 school pupils brought to the Museum for natural history instruction; supervised the preparation of 480 enlarged photographs of Canadian animals for the National Council of Young Men's Christian Associations for display at service centres in Canada; displayed some of the oldest plant, mammal, and bird specimens of the National Museum to draw attention to the Museum's one hundredth anniversary; modelled and coloured a life-sized male representation of the extinct Labrador duck (*Camptorhynchus labradorius*) for the bird exhibits, and a life-sized gull for use in the fossil tree exhibit in the hall of palaeontology; and collected locally 34 small mammals for the study collections. One hundred and ninety-one mammals and birds were lent to schools for nature study.

Publications

By R. M. Anderson:

"A Prior Name Revived for the Bean Mouse"; Canadian Field-Nat., vol. 57, p. 92, 1943.

"Instructions for Preserving Animal Specimens for Scientific Purposes"; Nat. Mus., Canada, Special Contrib. 43-2, pp. 1-34, 1943.

By R. M. Anderson and A. L. Rand:

"Notes on Chipmunks of the Genus *Eutamias* in Canada"; Canadian Field-Nat., vol. 57, pp. 133-135, 1943.

"The Long-tailed Meadow Mouse (*Microtus longicaudus*) in Canada"; Canadian Field-Nat., vol. 58, pp. 19-21, 1944.

"Townsend Vole (*Microtus townsendi*) in Canada"; Canadian Field-Nat., vol. 57, pp. 73-74, 1943.

Variation in the Porcupine (Genus *Erethizon*) in Canada"; reprinted from Canadian Jour. of Research, vol. 21, pp. 292-309, Sept. 1943.

By A. L. Rand:

"History of the Raccoon (*Procyon lotor* L.) in Nova Scotia"; Canadian Field-Nat., vol. 57, p. 95, 1943.

"Canadian forms of the Meadow Mouse (*Microtus pennsylvanicus*)"; Canadian Field-Nat., vol. 57, pp. 115-123, 1943.

"Bats in Saskatchewan"; Nat. Mus., Canada, Special Contrib. 43-5, 1943.

"The Southern Half of the Alaska Highway and its Mammals"; Nat. Mus., Canada, Bull. No. 98, pp. 1-50, 1944.

MAMMALS

Accessions

By Gift:

National Parks Bureau, Dept. of Mines and Resources: 1 skull of coyote (*Canis latrans latrans*), killed in Point Pelee National Park, Essex county, Ont., June 18, 1943, through R. J. Grant, Park Supt.; 6 skulls of Saskatchewan timber wolf (*Canis lupus griseus*), 6 adults and 1 half-grown cub, through Herbert Knight, Park Supt. Dr. C. H. D. Clarke: 22 skins and 25 skulls of small mammals collected on Alaska Highway, largely in southwestern Yukon.

Royal Canadian Mounted Police: 1 skin with skull of Arctic hare (*Lepus arcticus arcticus*), through Sergt. H. A. McBeth, near Pond Inlet, northern Baffin Island.

L. T. S. Norris-Elye, Director, The Manitoba Museum, Winnipeg: 1 skull (slightly imperfect) of the presumably extinct northern plains wolf or buffalo wolf (*Canis lupus nubilus*) dug up from "Swanston midden" in central Saskatchewan; 4 skulls of eastern timber wolf (*Canis lupus lycaon*), 2 male and 2 female adults from west of Fort William and on Rainy Lake, Ont.

Eldon Neely, Dunrobin, Carleton county, Ont.: 1 skinned body of coyote (*Canis latrans latrans*), shot near Lakefield, December 28, 1943. The first authentic specimen of the coyote east of the Great Lakes was taken in Lambton county, Ont., in 1919.

J. Windsor, Ottawa: 13 red fox (*Vulpes fulva*) carcasses; stomach contents examined and skulls preserved for osteological series; one cottontail rabbit (*Sylvilagus floridanus mearnsi*), in the flesh. This species is spreading in eastern Ontario and southern Quebec, and specimens from localities where it has recently appeared will be welcomed.

Dr. R. T. D. Wickenden, Bureau of Geology and Topography, Ottawa: Two skulls of young male white-tailed deer, one skull red fox, from Carleton county, Ont.

Stuart Criddle, Treesbank, southwestern Manitoba: One large buck Dakota white-tailed deer (*Odocoileus virginianus dacotensis*), skin, skull, and skeleton.

Henry Voisey, Hudson's Bay Company, Padlei Post, Keewatin district, N.W.T.: on west side of Hudson Bay, two shrews (*Sorex* sp.).

J. Dewey Soper, Winnipeg, Man.: Two specimens, male and female, of Mississippi Valley pocket gopher (*Geomys bursarius*), taken with others near Emerson, Man., May 15-17, 1943, the first authentic specimens taken in Canada, and of considerable economic interest as a serious agricultural pest working northward; two skins with skulls of dusky shrew (*Sorex obscurus*) from western Manitoba.

T. S. Hennessy, Ottawa: One Labrador woodchuck (*Marmota monax ignava*), skin only, taken at L'Anse Eclair, near Strait of Belle Isle, Que.

John Carroll, Bureau of Geology and Topography, Ottawa: One skin of Ungava porcupine (*Erethizon dorsatum picinum*), albino, killed by natives and presented by agent of Hudson's Bay Company.

Mr. Heggtveit, Ottawa: One young Eastern Canada porcupine (*Erethizon dorsatum dorsatum*), Gatineau county, Que., taken alive.

W. H. B. Hoare, Ottawa: Two short-tailed shrews (*Blarina brevicauda*), taken between Kingsmere and Meach Lake, Gatineau county, Que.

Kenneth Racey, Vancouver: One Oregon flying squirrel (*Glaucomys sabrinus oregonensis*), taken near Huntingdon, B.C.

A. Hamilton, Bureau Geology and Topography, Ottawa: One skin and skull of long-tailed weasel (*Mustela frenata noveboracensis*), from Grand Lake, Que.

F. J. Fraser, Bureau of Geology and Topography, Ottawa: One big brown bat (*Eptesicus fuscus*), Ottawa, Dec. 15, 1943.

Joseph Skillen, Ottawa: One meadow jumping mouse (*Zapus hudsonius*), in the flesh.

J. Proulx, Ottawa: One black squirrel, killed by motor car.

Miss Norma Stafford and Miss Shirley Benan, Ottawa: One black squirrel, found dead.

Dr. C. H. D. Clarke, Ottawa: One eastern porcupine (*Erethizon dorsatum*), Lanark county, Ont.; two white-footed mice, Ottawa.

H. F. Lambert, Ottawa: One mounted specimen of British red squirrel (*Sciurus vulgaris*), shot in Somersetshire, England, between 1860 and 1870.

Mrs. John Law, Ottawa: 11 specimens of heads and horns of African mammals.

Mrs. Edouard Chauvin, Hull, Que.: One Bonaparte weasel (*Mustela cicygnanii*), in the flesh; Nov. 11, 1943.

Hoyes Lloyd, Ottawa: Two house mice (*Mus musculus*).

Dr. D. A. Dery, Quebec, Que.: Two skulls of Atlantic harbour seal (*Phoca vitulina concolor*), from Gulf of St. Lawrence; one house rat (*Rattus norvegicus*) taken in duck marsh.

Mrs. Marion Nixon, Wauchope, Sask.: One jumping mouse, in the flesh.

A. A. Outram, Leaside, Ont.: One white-footed mouse (*Peromyscus maniculatus gracilis*), with parasite taken from same.

Mrs. Ester W. Cotes, McLean, Sask.: One pocket gopher (*Thomomys talpoides*), in the flesh.

Rickson A. Outhet, Mont Tremblant, Que.: One big brown bat (*Eptesicus fuscus*), and one cottontail rabbit (*Sylvilagus floridanus mearnsi*), taken in Montreal.

Professor Harold B. Hitchcock of Middlebury College, Vermont, and A. L. Rand (Museum staff): 30 bats taken hibernating in Fourth Chutes Cave, Renfrew county, Ont., January 8, 1943 (14 *Myotis subulatus leibii*, 6 *Myotis keenii septentrionalis*, 2 *Myotis lucifugus lucifugus*, 6 *Pipistrellus subflavus obscurus*, and 1 *Eptesicus fuscus*).

C. L. Patch, Ottawa (Museum staff): 28 short-tailed shrew (*Blarina*), 6 white-footed mice (*Peromyscus*); and one house mouse (*Mus musculus*), taken in suburbs of Ottawa.

Dr. R. M. Anderson (Museum staff): Two red-backed mice from Gatineau county, Que.

Dr. A. L. Rand, Ottawa (Museum staff): 116 small mammals taken on Alaska Highway (section between Dawson Creek, B.C., and Watson Lake, Y.T.).

Claude E. Johnson (Museum staff): Three valuable casts of skulls for study collection: (1) Alaska tundra wolf (*Canis lupus tundrarum*) topotype, adult male from Point Barrow, Alaska, original lent by Museum of Vertebrate Zoology, Berkeley, Calif.; (2) Saskatchewan timber wolf (*Canis lupus griseus*), skull from southeastern limit of range, St. Louis county, northeastern Minnesota, 1938, original lent by Museum of Natural History, University of Iowa; (3) Saskatchewan timber wolf (*C. l. griseus*),

skull of a very large adult male shot in 1943 about 40 miles south of Winnipeg, the most easterly specimen known of this race from Canada, lent by Mr. L. T. S. Norris-Elye, Director, The Manitoba Museum, Winnipeg.

REPTILES AND AMPHIBIANS

By Gift:

Dr. G. O. Barclay, Portland, Ont.: One pilot black snake (*Elaphe o. obsoleta*).
 Charles Bird: One Canadian toad (*Bufo hemiophrys*), Dauphin Lake, Man.; one northern swamp tree frog (*Pseudacris n. septentrionalis*), Makaroff, Man.
 G. H. A. Collins, Ottawa: One red-bellied snake (*Storeria occipitomaculata*).
 C. E. Johnson, Danford Lake, Que.: One green snake (*Ophicordys vernalis*).
 H. O. McCurry, Kingsmere, Que.: One milk snake (*Lampropeltis t. triangulum*).
 Fred W. Osborne, Kegashka, Que.: One garter snake (*Thamnophis s. sirtalis*).
 C. L. Patch, Ottawa, Ontario, and Farrellton, Que.: 2 red-bellied snakes (*Storeria occipitomaculata*).
 Dr. A. L. Rand, Liard River, B.C.: Two northwestern toads (*Bufo b. boreas*), and three northern wood frogs (*Rana s. cantabrigensis*).
 T. Roberts: One spotted salamander (*Ambystoma maculatum*), Hull, Que.
 Mr. Shearman, Ottawa: One swamp tree frog (*Pseudacris n. triseriata*).
 V. G. Trudel, Portland, Ont.: One tree frog (*Hyla v. versicolor*).
 R. W. Tufts, Kings county, N.S.: Two snapping turtles (*Chelydra serpentina*) eggs.

FISHES

By Gift:

Dr. A. L. Rand (Museum staff): A small collection of freshwater fishes made along the Alaska Highway, summer of 1943.

ORNITHOLOGICAL DIVISION

A. L. Rand determined the taxonomic status and distribution of a number of groups of birds for a "Catalogue of Canadian Birds". Various short papers and critical reviews of current zoological publications were published. A series of bird study groups was conducted in Ottawa and lectures on birds were delivered before the Fish and Game Society of Ottawa and the Province of Quebec Society for the Protection of Birds, in Montreal. Two educational leaflets on birds were issued, for both of which there has been a large demand. A number of students used the collections for identifications, plumage studies, and for details and ideas in art and colour work.

Biological investigation of the southern half of the Alaska Highway included a survey of the birds, resulting in many notes, photographs, and 149 bird specimens, involving some new records for the region. A report on the birds of the southern half of the Alaska Highway, based on the above-mentioned biological investigation, was prepared for publication. A start was made on assembling data on the birds of Yukon, with the object of preparing "A Distributional List of the Birds of the Yukon". Additions to the bird collection total 191 birds, 3 nests, and 5 eggs.

Publications

By A. L. Rand:

- "On Some British Columbia Birds"; Canadian Field-Nat., vol. 57, pp. 60-63, 1943.
- "Some Irrelevant Behaviour in Birds"; The Auk, vol. 60, pp. 168-171, April 1943.
- "Some Aspects of Canadian Birds"; Nat. Mus., Canada, Special Contrib. 43-3, pp. 1-11, 1943.
- "Some Familiar Canadian Birds"; Nat. Mus., Canada, Special Contrib. 43-4, pp. 1-15, 1943.

BIRDS

Accessions

By Gift:

- Dr. Harrison F. Lewis, National Parks Branch, Ottawa: One yellow-bellied sapsucker, picked up dead, Ottawa.
- Miss Carmen Goodwin, Ottawa: One cedar waxwing, found dead, Ottawa.
- Jimmy Wilson, Ottawa: Young downy woodpecker, from nest, Ottawa.
- Donald Wilby, Heatherdown, Alta.: Canada jay nest and three eggs, Heatherdown, Alta.
- John Carroll, Ottawa: Northern phalarope, Chimo, Que.
- J. A. Urquhart, Fort Smith, N.W.T.: Canada jay, nest and two eggs, Fort Smith, N.W.T.
- Mrs. John Monty, Gatineau Mills, Que.: One king weaver.
- Dr. A. L. Rand, Ottawa: 149 bird skins, one nest, Alaska Highway (British Columbia and Yukon).
- William H. Moore, Hawkshaw, N.B.: One Savannah sparrow, near Nakowich, N.B.
- Dr. N. C. Sully, Ottawa: One American rough-legged hawk, Low, Que.
- Lieutenant Chenag, Canadian Army: One ruffed grouse, albino, near Eganville, Ont.
- William Greenless, Montreal, Que.: One gannet, Lake St. Louis, Que.
- Dr. Douglas Leechman, Ottawa: One redpoll, Museum grounds, Ottawa, Ont.
- R. W. Tufts, Wolfville, N.S.: One Virginia rail, one Savannah sparrow, one raven, one barred owl, Wolfville, N.S.
- A. E. Porsild, Ottawa: 26 birds collected and purchased in Greenland.
- Dr. R. T. D. Wickenden, Ottawa: One barred owl, near Ottawa.
- Dr. R. M. Anderson, Ottawa: One skeleton (bird), Blue Sea Lake, Que.

NATIONAL HERBARIUM

A. E. Porsild, Botanist, who had been on loan to the Department of External Affairs to act as Canadian Consul at Godthaab, Greenland, resumed his duties in the National Herbarium on November 1, 1943. While in Greenland he completed a study of the flora of the Godthaab district, and added to his collections about 800 numbers of rare or critical Greenland plants. He named a number of small but important collections made by field parties of the Department of Mines and Resources, chiefly in Ungava Peninsula, northern British Columbia, Yukon, and Alaska, and prepared reports on Greenland for the Department of External Affairs. He prepared a 7,500-word manuscript entitled "Emergency Food in Arctic Canada" for use of the Royal Canadian Air Force.

Miss H. T. Harkness, Herbarium Assistant, mounted 1,387 botanical specimens, and these, together with 1,730 plants collected in Alaska by Mr. Porsild in 1926, were inserted in the Herbarium, thus increasing the

number of listed specimens in the National Herbarium to 167,807. She prepared for distribution a large collection of plants made by the late Dr. M. O. Malte in New Brunswick in 1929 and rearranged the collection of United States plants.

Eight hundred and seventy-one herbarium specimens were received by exchange and 9,020 by donation. Eight thousand of these specimens, including 1,730 original numbers and 5,270 duplicates, were collected in Alaska in 1926 by A. E. Porsild and formed the basis of his 134-page report "Contributions to the Flora of Alaska", published in *Rhodora* in 1939. One thousand and seventy-two plants were lent to other botanical institutions for study purposes. The National Herbarium was used extensively by visiting botanists, several of whom spent as much as 3 weeks collecting information for botanical studies.

Publications

By A. E. Porsild:

Materials for a Flora of the Continental Northwest Territories of Canada; *Sargentia*, IV:1-79, by the Harvard University Press, Sept. 1943.

Birds of the Mackenzie Delta; Canadian Field-Nat., vol. 57, pp. 19-35, 1943.

Accessions

<i>Plants received on account of exchange.....</i>	1,714
British Columbia Dept. Agriculture (J. W. Eastham), Vancouver B.C.	26
A. J. Breitung, McKague, Sask.	326
Gray Herbarium, Harvard Univ., Cambridge, Mass.	166
Iowa State College, Ames, Iowa....	882
N.Y. Botanical Garden (Bassett Maguire)....	76
Stanford University, Dudley Herbarium, Cal....	238
<i>Plants received as donations.....</i>	9,056
Dr. H. M. A. Rice, Dept. Mines and Resources, Ottawa.....	25
John Carroll, Dept. Mines and Resources, Ottawa.....	78
Dr. H. S. Bostock, Dept. Mines and Resources, Ottawa.....	8
Dr. A. L. Rand, Dept. Mines and Resources, Ottawa.....	49
Dr. C. H. D. Clarke, Dept. Mines and Resources, Ottawa....	363
A. E. Porsild, Dept. Mines and Resources, Ottawa.....	8,464
Dr. Geo. H. Turner, Fort Saskatchewan, Alta.	29
Lt.-Col. D. B. Holman, Calgary, Alta.	40
<i>Plants sent on account of exchange.....</i>	455
Gray Herbarium, Harvard University, Cambridge, Mass.....	455
<i>Plants lent</i>	1,073
Gray Herbarium, Harvard University, Cambridge, Mass.....	78
A. Kellett, Ottawa, Ont.	32
N.Y. Botanical Garden (Bassett Maguire), New York	796
Fr. Marie-Victorin, Univ. of Montreal, Montreal, Que.	18
Fr. Louis Marie, Oka, Que.	149

EDUCATIONAL WORK

Museum educational activity was concerned with the arrangement of museum collections and the interpretation of these collections to the public by various media. Although operating under war-time restrictions the educational activity of the National Museum has been maintained, and though curtailed in some directions has been increased where possible.

The greater part of the National Museum collections was not available to the public owing to the closing of the exhibition halls to make space for members of the Museum staff previously housed elsewhere. However, every effort was made to permit students and organized groups to see and study the larger habitat exhibits in the Biological Hall. The Dinosaur Hall was rearranged and now, together with the new fossil tree habitat exhibit, provides better facilities for study groups. Exhibits are labelled in non-technical language. Special educational exhibits were arranged by the scientific staff of the National Museum, who also conducted study groups. Study classes had an attendance of 7,542. More than 147,773 persons visited the sections of the National Museum still open to the public, and in addition many thousands of senior and junior school pupils came in groups with their teachers. Other Museum activities were attended by 45,864 persons, making a total attendance of 201,178 for the year.

By means of correspondence, publications, and visual aids, accurate and specialized knowledge on anthropology, biology, and other phases of the natural history of Canada was brought to many who could not otherwise obtain it. Much time was given to the identification of specimens, the loan of material, and the selection of photographs to illustrate scientific journals, school textbooks, and magazine and newspaper articles published in the United States and England, as well as in Canada.

One of the most popular and direct methods of spreading accurate information on these subjects is by means of motion pictures and coloured lantern slides, which were lent to Canadian educational institutions and other museums free of charge except for cost of transportation. No new films were added to the loan library other than replacements of 16 mm. prints too worn to be of further use. Museum films and slides were seen by 67,414 persons. This figure is compiled from attendance records supplied by borrowers, but cannot be considered a complete record as many borrowers fail to furnish figures for attendance.

LECTURES

The series of popular lectures and motion picture programs organized by the National Museum was one of the most successful ever presented. These lectures, illustrated with motion pictures and lantern slides, have been carried on continuously for 30 years, and are of such immediate interest as to attract audiences that tax the capacity of the Lecture Hall. In addition to lectures and motion picture programs on natural history and related subjects, the Lecture Committee has presented on the 1943-44 series addresses on up-to-date topics of general concern.

The subjects given on the series were:

The St. Lawrence Hinterland and its Animal Life. By Paul Provencher, Quebec North Shore Paper Co., Baie Comeau, Que.

Design for Victory. Motion Pictures.

Indian Hunters and Fisher Folk of the North. By Marius Barbeau, Ethnologist, Nat. Mus., Canada, Ottawa.

Offence Review. Motion Pictures.

Out Where the West Begins. By J. M. Humphrey, Vancouver, B.C.

The World in Action. Motion Pictures.

A Glimpse into A Submarine. By Commander R. H. Stokes-Rees, R.N., British Admiralty Technical Mission, Ottawa.

Bermuda. By W. J. Hurlow, Literary Editor of the Ottawa Citizen.

A Glimpse into a Submarine. By Commander R. H. Stokes-Rees, R.N., British Admiralty Technical Mission, Ottawa. (Repeated for those who could not gain admission on February 16.)

Palestine. By the Reverend A. Ian Burnet, St. Andrew's Presbyterian Church, Ottawa.

A Fur Raising Tale. By D. J. Allan, Supt. of Reserves and Trusts, Indian Affairs Branch, Dept. of Mines and Resources, Ottawa.

The total attendance on Saturday mornings was 11,400 and at the Wednesday evening presentations 6,350.

LECTURE HALL

Numerous organizations held meetings of a scientific or educational nature in the lecture hall of the National Museum during the year. In addition to its use by the National Museum, 136 reservations of the hall were made by these organizations. A total of 43,700 persons attended the meetings. The lecture hall has a seating capacity of 598, and has equipment for projecting both 35 mm. and 16 mm. films, sound and silent, and lantern slides.

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ANTHROPOLOGICAL DIVISION

D. Jenness, Chief of the Division, continued on loan to the Royal Canadian Air Force.

C. Marius Barbeau, Ethnologist, made several visits to Montreal and Quebec for an examination of records, available in institutions there, of early French customs, handicrafts, and folklore. He arranged for a representative to attend the Indian ceremonies, lasting 2 weeks, which accompanied the erection of six totem poles at Skeena Crossing and Kitwanga, B.C. He prepared and delivered 15 lectures at Laval University on anthropology and folklore, and 20 lectures on human geography at Ottawa University. He completed for publication outside the Department, manuscripts, in book length, on *Trésor des anciens Jésuites*, and *Sirens of the North*. One of his books was published, namely, *Madones Canadiennes*.

Two extensive summaries of the history of anthropology and folklore in Canada and North America were written for lectures requested by Montreal and Laval Universities. About 250 photographs illustrating the ancient arts and crafts of the St. Lawrence Valley were taken and the folk-song collection of the Museum was increased by 30 items.

Douglas Leechman, Assistant Archæologist, continued the preparation of his detailed monograph on the Cape Dorset Eskimo culture; he carried out a short investigation of a Huron ossuary on Aylmer Island, Ont.; visited the Royal Ontario Museum in Toronto where he studied the archæological collections; and visited Andover, Mass., to make a detailed examination of important archæological material recently collected in the Yukon on one of the old migration routes from Asia to America. He presented a paper on trephined skulls to the Royal Society of Canada; wrote two papers on Eskimo and Indian dwellings for the *Beaver* and two

papers on the Indians of Eastern Canada for *Queen's Quarterly*. He carried on research work on the distribution of rubbed slate implements in southwestern Ontario and is preparing a paper on this subject. Another paper on the economic value of natural history museums is in course of preparation. He prepared also a detailed report on the present and future needs of the National Museum of Canada and a plan for its reorganization. He continued the compilation of archæological data, and answered a large number of inquiries by letter and in interviews. He continued the supervision of the anthropological collections and added about twenty accessions during the fiscal year.

Publications

How the Raven Stole the Sun. By Marius Barbeau. Trans. of the Royal Society of Canada, Section II, 1944.

Madones canadiennes. By Rina Lasnier and Marius Barbeau. Beauchemin, Montreal, 1944.

Modalité dans nos mélodies populaires. By Marius Barbeau. Mémoires de la Société royale du Canada, 1944.

Mountain Cloud. By Marius Barbeau. The Caxton Printers, U.S.A., and the Macmillan Company of Canada, 1944.

Saintes artisanes, I—Les brodeuses. By Marius Barbeau. Editions Fides, Montreal, 1944.

Nos belles chansons populaires. By Marius Barbeau. L'enseignement secondaire au Canada. April 1944.

Fils d'or et d'argent. By Marius Barbeau. Canadian Review of Music and Art. April-May 1944.

Gold and Silver Threads. By Marius Barbeau. Canadian Review of Music and Art. April-May 1944.

Initiation à la géographie humaine. By Raymond Tanghe and Marius Barbeau (Critique). May 1944.

Tobacco for the Fur Trade. By Marius Barbeau and Clifford Wilson. The Lighter, Department of Agriculture, Ottawa, May 1944.

Paul Rivet: Les origines de l'homme américain. By Marius Barbeau (Critique). Gants du Ciel, Montreal. June 1944.

Chansons de noces. By Marius Barbeau. Mémoires de la Société généalogique Canadienne-Française. June 1944.

Ce que mangeaient nos ancêtres. By Marius Barbeau. La Famille, Laprairie, Que. June-July 1944.

J'ai cueilli la belle rose (chanson). By Marius Barbeau. La Revue moderne. Montreal. July 1944.

The Two Sorcerers—An Indian Story Retold. By Marius Barbeau. Family Herald and Weekly Star. July 12, 1944.

King-ego, Haida Carver. By Marius Barbeau. Canadian Review of Music and Art. Aug.-Sept. 1944.

Le beau danseur. By Marius Barbeau. La Revue moderne. September 1944.

Ce que mangeaient nos ancêtres. By Marius Barbeau. Aujourd'hui, un Digest français, Montreal. September 1944.

Country-made Trade Goods. By Marius Barbeau. The Beaver, Winnipeg. September 1944.

Le long de la mer jolie. By Marius Barbeau. La Revue moderne, October 1944.

Ruby Creek Stampede. By Marius Barbeau. Family Herald and Weekly Star, Montreal. October 18, 1944.

Traditional Arts of Quebec. By Marius Barbeau. Canadian Review of Music and Art. October-November 1944.

Arts populaires laurentiens. By Marius Barbeau. Canadian Review of Music and Art. October-November 1944.

Nos arts domestiques. By Marius Barbeau. 20^e Siècle, Ottawa. November 1944.

Ceintures fléchées. By Marius Barbeau. 20^e Siècle, Ottawa. December 1944.

Siren of the Seas. By Marius Barbeau. The Beaver, Winnipeg. December 1944.

En quête de connaissances anthropologiques et folkloriques dans l'Amérique du Nord depuis 1911. By Marius Barbeau. Archives de Folklore, Université Laval, 1945.

Frederick Alexie, a Primitive. By Marius Barbeau. Canadian Review of Music and Art. December-January 1945.

Le mariage anglais. By Marius Barbeau. La Revue moderne, Montreal, January 1945.

Stampede of '98 is Live Memory Still. By Marius Barbeau. Family Herald and Weekly Star, Montreal. January 31, 1945.

Les Raftsmen. By Marius Barbeau. La Revue moderne, February 1945.

Le saint Georges de Louis Jobin. By Marius Barbeau. 20^e Siècle, Ottawa. February 1945.

Petite hirondelle. By Marius Barbeau. La Revue moderne, Montreal. March 1945.

The Development of Painting in Canada, 1665. By Marius Barbeau. Canadian Art (book review). March 1945.

Origin of the Hooked Rug Goes Back Over a Century. By Marius Barbeau. Family Herald and Weekly Star. March 7, 1945.

Lectures

By Marius Barbeau:

An address given to the Stewarton Young People Association entitled: Canadian Indian and Folk Songs. May 1944.

An address given to the McLeod Street Church Y.P.U. entitled North Pacific Indians. January 1945.

Summary of a course of 30 lectures on the human geography of North America—North Americans, their backgrounds, given at the Ottawa University, 1945.

Series of lectures given at Laval University during the month of March on folklore and ethnography. March 1945.

Lecture given at the Montreal Art Association on Ancient Painters of French Canada. February 12, 1945.

Interview on Canadian folklore at the National Museum was given over the CBC Montreal. February 1945.

Series of 15 lectures on folklore given in Quebec. March 1945.

Three radio sketches on folk stories for CBC on: The Handsome Dancer; the Witch Canoe; and Lumberjacks.

Papers and Addresses

By Douglas Leechman:

Archaeology in Canada. Lions' Club, Smiths Falls, October 12, 1944.

Indian Musical Instruments. High School of Commerce, November 23, 1944.

Trephined Skulls from British Columbia. Trans., Royal Society of Canada, Sec. II, 1944.

Wigwam and Teepee. The Beaver, December 1944.

Igloo and Tupik. The Beaver, March 1945.

John Rastell and the Indians. Queen's Quarterly, "Spring", 1944.

Longfellow's *Hiawatha*. Queen's Quarterly, "Autumn", 1944.

Accessions

Alan Keefer, Rockcliffe, Ont.: Dogrib Indian specimens from Fort Rae, N.W.T.
 D. A. Nichols, Sorrento, B.C.: Eskimo specimens from Fort Ross, N.W.T.
 L. E. Clark, Lake Megantic, Que.: Neolithic stone hammer from England.
 Const. V. H. Marchant, R.C.M.P.: Eskimo specimens from Baffin Island, N.W.T.
 Mrs. E. E. Stockton, Ottawa, Ont.: Kutchin Indian specimens from the Yukon.
 Superfluity Shop, Ottawa, Ont.: Prairie Indian moccasins.
 R. T. D. Wickenden, Ottawa, Ont.: Archaeological material from Saskatchewan.
 C. H. D. Clarke, Toronto, Ont.: One decorated grave ornament from the Yukon.
 H. Silver, Noranda, Que.: One chipped stone arrowpoint from Nova Scotia.
 Miss Kathleen Rice, Herb Lake, Man.: Archaeological material from Herb Lake.
 T. Y. Bassett, Duncan, B.C.: Archaeological material from Duncan, B.C.
 C. O. Hage, Ottawa, Ont.: One chipped stone arrowpoint from Trout Lake, N.W.T.
 Miss M. McEwen, Toronto, Ont.: Indian pottery from Castleford, Ont.
 C. Smith, Ottawa, Ont.: One Indian whetstone from Quyon, Que.
 Mrs. Cote, Ottawa, Ont.: Western Cree beaded bags.
 H. S. Bostock, Ottawa, Ont.: Two chipped stone knives from the Yukon.
 Women's Art Association, Toronto, Ont.: Specimens of Prairie Indian beadwork.
 Miss Low, Ottawa, Ont.: Eskimo specimens from Ungava.

BIOLOGICAL DIVISION

R. M. Anderson, Chief of the Division, continued research on mammal life in Canada, as a result of which much progress was made in the revision of Canadian species and their relationship with other North American forms. He completed the "Catalogue of Canadian Recent Mammals". This is the first comprehensive inventory of the mammal fauna of Canada. It gives the systematic position and taxonomic status of every kind of mammal known to have occurred in Canada within historic times. The Catalogue lists 592 forms that can be considered as occurring in Canada in a wild state. Of these, 469 forms and 40 types are in the collection of mammals in the National Museum. For each form is given the original description, the most important synonyms, the type locality, the geographical distribution, and other pertinent data useful to scientific mammalogists, to naturalists, and to organizations and individuals interested in wild-life conservation and study.

Reports prepared for publication were written on Mammal Investigations on the Canol Road and Mammals of Yukon. Various other reports, papers, and articles were advanced, for printing as Museum publications, or for printing in technical journals.

A. L. Rand, Associate Zoologist, divided his time between the Biological and the Ornithological Divisions. During the period from May to September, he made a survey of the mammals and birds in that area in the Yukon and Northwest Territories traversed by the Canol Road. This resulted in the collection of many notes, photographs, and 499 mammal specimens.

The assembled data on the status of Canada's fur-bearers were brought together in a report. Progress was made in assembling records on the

mammals of Alberta. A report on the mammals of the Ottawa District was completed for publication. Considerable information was compiled and supplied to the Department of Mines and Resources, Manitoba, for use as the basis of a report on the mammals and birds of that province.

C. L. Patch, Chief Taxidermist and Herpetologist, modelled and coloured, for exhibition, a life-sized female representation of the extinct Labrador duck, and a representation of the extinct great auk. He prepared specimens for exhibition and for the School Loan Collection, and entered 247 cards containing anatomical measurements of 192 birds and 55 mammals for use in preparing future specimens. Specimens of birds and mammals lent to schools for nature study numbered 239. A number of inquiries regarding herpetology were answered.

Claude E. Johnson, Collector-preparator Specialist, in addition to colouring 44 lantern slides, made 413 line drawings, and catalogued 1,884 skins and skulls. He also made 2 plaster moulds and 3 rubber moulds, as well as 5 plaster and wax casts.

D. J. Blakely and J. E. Perron continued work on the preparation of specimens for the study collections and for the School Loan Collection.

Publications

By A. L. Rand:

The Recent Status of Nova Scotia Fur Bearers; Canadian Field-Nat., vol. 58, pp. 85-96, 1944.

The Status of the Fisher, *Martes pennanti* (Erxleben), in Canada; Canadian Field-Nat., vol. 58, pp. 77-81, 1944.

Accessions

MAMMALS

By Gift and Exchange:

National Parks Bureau, Dept. of Mines and Resources: 1 red fox (*Vulpes fulva regalis*), Prince Albert National Park, Sask.; 1 grizzly bear (skin only), killed October 17, 1943, near summit of Rogers Pass, Glacier National Park, B.C.; 3 pronghorn antelope (*Antilocapra americana*) heads, in the flesh, from Nemiskam National Park, Alta.; 3 Rungius grizzly (*Ursus canadensis rungiusi*), female with 2 cubs, killed June 13, 1944, in Waterton Lakes National Park, Alta.; 8 Sask. timber wolf (*Canis lupus*), skulls from Prince Albert National Park, 5 males and 3 females; 1 Yellowstone big grizzly (*Ursus horribilis imperator*), adult male, skin and skull, killed at Sherbrooke Lake, Yoho National Park, June 17, 1944.

Northwest Territories Administration, Dept. of Mines and Resources: 2 domestic reindeer (*Rangifer* species), adults with skin, skull, and complete skeleton, from Reindeer Station on Richards Island, Mackenzie delta, N.W.T.

Royal Canadian Mounted Police: 4 Mackenzie varying lemming (*Dicrostonyx groenlandicus* subspecies), 1 adult female with 3 nearly grown young, brought out alive from Cape Kellett, Banks Island, N.W.T., in summer coat, August 21, 1944.

Professor William T. Shaw, Fresno State College, California: 1 Richardson lemming mouse (*Synaptomys b. borealis*), from Brightsand Lake, near St. Walburg, Sask.

Dr. R. T. D. Wickenden, Ottawa: 1 skull of northern white-tailed deer (*Odocoileus virginianus borealis*), and 1 cottontail (*Sylvilagus floridanus mearnsi*), from Ottawa district.

L. T. S. Norris-Elye, Director, Manitoba Museum, Winnipeg: 1 skull of timber wolf (*Canis lupus*), from Whiteshell Forest Reserve, Man.

Corporal Downy, R.C.M.P., Ottawa: 1 big brown bat (*Eptesicus fuscus*).
 George M. Douglas, Lakefield, Ont.: 2 skulls of eastern timber wolf (*Canis lupus lycaon*), from Peterborough county, Ont.
 J. Dewey Soper, Winnipeg, Man.: 1 young porcupine (*Erethizon dorsatum*), skin and skull, and one adult skull and one skin of coyote (*Canis latrans*), from northwestern Alberta; 1 skin and skull of dusky shrew (*Sorex obscurus*), taken in Riding Mountain National Park, Man.
 T. H. Manning, Ottawa: 41 skins and skulls of small mammals (Labrador lemmings, meadow mice, red squirrels, snowshoe rabbit), from northern Quebec and east coast of Hudson Bay.
 Mrs. Ester W. Cates, McLean, Sask.: 1 Saskatchewan jumping mouse (*Zapus princeps minor*).
 N. Albulet, Winnipeg, Man.: 1 white-footed mouse (*Peromyscus*), from Regina, Sask., and 3 short-tailed shrews (*Blarina brevicauda*), from Ithaca, New York.
 Wayne Robinson, fish and game warden, province of Ontario, Ottawa: 1 skull of coyote (*Canis latrans*).
 Rickson A. Outhet, Mont Tremblant, Que.: 1 flying squirrel (*Glaucomys sabrinus*), and 1 red squirrel (*Tamiasciurus hudsonicus*), skins with skulls.
 Dr. C. H. D. Clarke, National Parks Bureau, Ottawa: 24 mammals from northwestern British Columbia and southwestern Yukon.
 T. Grayson Bell, Jr., Ottawa: 1 Bonaparte's weasel (*Mustela erminea cicognanii*), from Blue Sea Lake, Que.
 V. L. Eardley-Wilmot, Bureau of Mines, Ottawa: 24 bats (23 *Myotis lucifugus lucifugus* and 1 *Myotis keenii septentrionalis*), collected in October 1944 in cave near Craigmont, Renfrew county, Ont.
 C. O. Hage, Bureau of Geology and Topography, Ottawa: 1 skull of northern timber wolf (*Canis lupus occidentalis*), female, from Liard River, 20 miles below mouth of South Nahanni River, N.W.T.
 E. S. Richards, Supt. Gatineau National Park, Federal District Commission, Ottawa: 1 skull of coyote (*Canis latrans*), shot October 29, 1944, near Luskville, Eardley township, Gatineau county, Que., near boundary of Gatineau National Park.
 Reg. Guy, Ottawa: 1 Bonaparte's weasel (*Mustela erminea cicognanii*), taken 20 miles above mouth of Gatineau River, Que.
 Stuart Criddle, Treesbank, Man.: 2 red squirrels (*Tamiasciurus hudsonicus*), skins with skulls.
 J. V. Butterworth, Bureau of Geology and Topography, Ottawa: 1 flat skin of northern mantled ground squirrel (*Citellus lateralis tescorum*), on Wapiti River, Alta., near northern limit of range of this species.
 Charles Smith, Banks Island, N.W.T.: 1 skin of unborn seal pup.
 Arnold Buzzalini, Whitehorse, Yukon: 1 skull of Alaska moose (*Alces americana gigas*), from Ross River, Canol Road, young male.
 Dr. Harold B. Hitchcock, Middlebury College, Vermont: 8 bats collected Feb. 25, 1945, in Fourth Chute cave, Renfrew county, Ont., 3 *Myotis keenii septentrionalis*, 2 *Myotis subulatus leibii* and 3 banded specimens of the big brown bat (*Eptesicus fuscus*).
 Rowley Frith, Frith's Greenhouse, Ottawa: 1 New York long-tailed weasel (*Mustela frenata noveboracensis*), taken November 11, 1944.
 Willis White, South March, Carleton county, Ont.: skulls of 2 large dogs killed March 15, 1945, while chasing deer near west end of Connaught Rifle Ranges. Determined as dogs by Provincial Fish and Game Department, Toronto.
 St. Lawrence Paper Mills Co., Ltd., Trinity Bay, Côte Nord, Que.: 1 snowshoe rabbit (*Lepus americanus americanus*), in the flesh. Abnormal pelage, partly melanistic, coat silvery and black, largely black.

G. Turner, Fort Simpson, N.W.T.: 1 skull of adult male northern timber wolf (*Canis lupus occidentalis*), taken at mouth of Netla River, 12 miles up Liard River south of mouth of South Nahanni River, N.W.T.

R. W. Bryenton, Herb Lake, Man.: 1 least weasel (*Mustela rixosa rixosa*), male adult, skin with skull.

Willie LaBrie, taxidermist, Kamouraska, Que.: 1 mounted specimen of northern long-tailed ermine (*Mustela frenata occiser*). Purchased.

Dr. A. L. Rand and W. H. Bryenton obtained on field expedition along the Canol Road between Whitehorse, Yukon, and Norman Wells, Mackenzie district, N.W.T.: 499 mammals.

Dr. A. L. Rand: 2 little brown bats (*Myotis lucifugus*), carrying numbered leg bands, from Lafleche Cave, Gatineau county, Que., March 15, 1945.

C. L. Patch: 1 big brown bat (*Eptesicus fuscus*), killed in house near Kazabazua, Gatineau county, Que.

C. E. Johnson: 1 little brown bat (*Myotis lucifugus*), killed in cottage at Danford Lake, Gatineau county, Que.

Miss P. M. Hurlbert: 1 big brown bat (*Eptesicus fuscus*), picked up in National Museum, Ottawa.

A. E. Porsild: 1 skull of Atlantic walrus (*Odobenus rosmarus*), from Godthaab, West Greenland.

ORNITHOLOGICAL DIVISION

A. L. Rand, Associate Zoologist, divided his time between bird work in the Ornithological Division and mammal work in the Biological Division.

With one assistant, a summer survey of the birds of the Canol Road, Yukon and Northwest Territories, was carried out. This resulted in many notes, photographs, and 489 bird specimens.

The assembling of published data on Yukon birds was finished, and a report on Yukon birds as well as on those of the Canol Road is well advanced. Both involved considerable critical taxonomic study. A start was made in assembling published data on Alberta birds.

At the request of the Minister of Mines and Natural Resources of Manitoba, data were supplied him for a pamphlet on Manitoba game birds. Various short papers making new data available, and reviews of current literature were prepared in the course of routine work. Routine work included identifying specimens and supplying information for correspondents, and care of the collections and files.

A number of investigators used the collections for study purposes.

Notable acquisitions during the year include an important collection of bird skins, well prepared and in good condition, largely from southern Saskatchewan, donated by Mr. N. Albulet of Winnipeg; and a specimen of the extinct passenger pigeon, a mounted male in good condition, donated by the Shernfold School, Ottawa.

Lectures

By A. L. Rand:

"Bird Study"; Ottawa Field-Naturalists' Club, April 27, 1944.

"Northward with Truck and Tent", dealing in part with the birds and mammals of the Northwest; National Museum Lecture series, February 24 and 28, 1945.

Publications

By A. L. Rand:

Birds of the Alaska Highway in British Columbia; Canadian Field-Nat., vol. 58, pp. 111-125, 1944.
 Notes on the Palm Warbler, *Dendroica palmarum* (Gmelin), in Canada; Canadian Field-Nat., vol. 58, pp. 181-182, 1944.

By Gift:

Accessions

Richard Prette, Ottawa: One olive-backed thrush.
 A. E. Bourguignon, Ottawa: One ruddy turnstone and three ducks.
 Dr. R. M. Anderson, National Museum: One purple martin.
 Miss Edith Roberts, Ottawa: One nighthawk.
 T. H. Manning, Ottawa: 12 birds from Hudson Bay.
 Dr. A. L. Rand, National Museum: 489 birds from the Canol Road.
 Joseph Yanik, Fort Reliance: Two magpies.
 N. Albulet, Winnipeg: 203 birds from Saskatchewan and New York.
 James Smart, National Parks Bureau: One Tennessee warbler.
 A. L. Goodall, Ottawa: One ruby-throated hummingbird.
 Dr. C. H. D. Clarke, Ottawa: 14 birds from the Alaska Highway.
 Shernfold School, Ottawa: One mounted passenger pigeon.
 Donald Olmstead, Ottawa: One duck hawk.
 Dr. Eugene Murphey, Augusta, Georgia: One Mississippi kite, one purple gallinule, two chuck-wills-widows.
 Charles Smith, Banks Island, Franklin district: 11 birds from Banks Island, N.W.T.
 A. E. Porsild, National Museum: Six miscellaneous bird skins from Greenland.
 W. Schofield, Petersfield, Man.: Eight great horned owls, three goshawks.
 Lands. Parks and Forests Branch, Ottawa: Two whistling swans, one pied-billed grebe, one osprey.
 G. G. Ommanney, Hudson Heights, Que.: One tree sparrow.
 Dr. O. H. Hewitt, Ottawa: Five birds from Ontario.
 R. W. Tufts, Wolfville, N.S.: One European widgeon.
 Dr. M. J. Dunbar, Ottawa: Six birds from Greenland.
 Major Allan Brooks, Okanagan Landing, B.C.: Two house finches.
 Murray Curtis, Ottawa: One ruffed grouse, one snowy owl.
 J. P. Lavigne, Hull, Que.: One great horned owl.
 D. J. Blakely, National Museum, Ottawa: Nine birds.

NATIONAL HERBARIUM

A. E. Porsild, Botanist, in the period June to September made a survey of the flora in the vicinity of the Canol Road in Yukon and Northwest Territories. In addition to numerous ecological and taxonomical notes, soil samples, and photographs, he obtained a collection of 12,000 plants. Later, most of this collection was named and catalogued, together with a collection of 302 plants from the east slope of the Mackenzie Mountains, contributed by V. C. Wynne-Edwards, McGill University. He completed for publication a report on "The Alpine Flora of the East Slope of Mackenzie Mountains, N.W.T.", and continued work on a large monograph on the flora of southeastern Yukon. Also he prepared for publication

"A Survey of the Adventitious Flora of Ivigtut in Southwest Greenland", "The Mammals of the Maekenzie Delta", and "The So-Called *Woodsia alpina* in Eastern North America".

He was a Canadian delegate at meetings of the Arctic Institute of North America, held in New York, and he visited the botanical institutions of Harvard University where he carried out herbarium and library researches.

Miss H. T. Harkness, Herbarium Assistant, mounted and inserted 4,028 herbarium specimens, bringing the total listed specimens in the National Herbarium to 171,835. She filed four issues of Gray Herbarium Index cards and prepared a check-list of plants of Jasper, Banff, and Waterton Lakes National Parks.

By A. E. Porsild:

Lectures

"Greenland, its Nature and People"; Ottawa Field-Naturalists' Club, April 20, 1944.
"Wild Flowers of Yukon and the Canol Road"; Province of Quebec Bird Society, Montreal, Que., Feb. 12, 1945.

By A. E. Porsild:

Publications

"Notes from Labrador Peat Bog"; Canadian Field-Nat., vol. 58, pp. 4-6, 1944.
"Vascular Plants collected on Kiska and Great Sitkin Islands in the Aleutians by Lt. H. R. McCarthy and Cpl. N. Kellas"; Canadian Field-Nat., vol. 58, pp. 130-131, 1944.

PLANTS

Accessions

By Gift:

J. W. Eastham, Vancouver, B.C.: 371 rare or critical plants of British Columbia.
C. Heimburger, Ottawa: 25 rare or critical plants of Ontario.
C. E. Johnson, Ottawa: Cones of *Picea excelsa*.
A. Kellett, Ottawa: Photograph of *Aquilegia saximontana*.
Ernest Lepage, Rimouski, Que.: Type specimen of *Calamagrostis Lepageana*.
J. A. Munro, Okanagan Landing, B.C.: 218 plants from British Columbia.
A. E. Porsild (staff): 12,000 plants from Yukon.
George H. Turner, Fort Saskatchewan, Alta.: 13 *Potamogeton* from Alberta.
V. C. Wynne-Edwards, Montreal, Que.: 302 plants from Mackenzie Mountains, N.W.T.

By Exchange:

A. J. Breitung, Tisdale, Sask.: 20 plants from Saskatchewan.
J. P. Anderson, Ames, Iowa: 882 plants from Alaska and Yukon.
W. Eyerdam, Seattle, Wash.: 200 plants of Alaska and Washington.
Gray Herbarium, Harvard University: 112 plants of New Brunswick.
New York Botanical Garden, N.Y.: 185 plants from Rocky Mountains.
U.S. National Herbarium, Washington, D.C.: 54 miscellaneous plants.

EDUCATIONAL WORK

National Museum educational activity was the sole phase of Museum work that did not suffer unduly through war restrictions such as shortage of money and lack of space.

Although the greater part of the Museum exhibits were not available to the public, owing to the closing of the Exhibition Halls, every effort was made to permit students and others to see and study material in such sections of the Museum as were accessible. Special educational exhibits were arranged by the scientific staff for organized study groups, one of which had an attendance of 6,500. The sections of the Museum open to the public were visited by 148,852 persons including a large number from the armed forces, and thousands of students visited the museum with or without their teachers. Other museum activities were attended by 59,269 persons, making a total attendance of 208,121.

LECTURES

The annual series of lectures and motion picture programs continued to attract capacity audiences. From the following list of subjects presented it will be apparent that the Lecture Committee has endeavoured to place on its programs, in addition to lectures and motion pictures on natural history, a number on topics of current social interest.

- A Visit to Brazil and Peru. By Stanley Lewis, Mayor of Ottawa.
- The Netherlands (Motion Pictures).
- Speaking of Food. By Laura Pepper, Chief, Consumer Service, Dept. of Agriculture, Ottawa.
- Battle of Russia (Motion Pictures).
- Adventures of Chico (Motion Picture).
- A Glimpse of Mexico. By R. H. K. Marett, United Kingdom Information Board, Ottawa.
- Pledge to Bataan (Motion Picture).
- Northward with Truck and Tent. By A. L. Rand, Ph.D., Nat. Mus., Canada, Ottawa.
- Recent Glimpses of Britain and the Continent. By Air Commodore W. Ewart Cockram, R.C.A.F., Ottawa.
- Birds on the Home Front. By Oliver H. Hewitt, Ph.D., Chief Migratory Bird Officer for Ontario and Quebec, National Parks Bureau, Ottawa.
- Adventure in the South Seas (Motion Picture).
- Gems and Precious Stones. By John Lovell Baker, Gemologist, Henry Birks and Sons, Montreal.

The total attendance of school children on 9 Saturday mornings was 9,745 and 5,824 adults attended the same number of Wednesday evening presentations.

Members of the Canadian Boy Scouts Association acted as ushers during the children's lectures and their co-operation, together with that of the Royal Canadian Mounted Police, was greatly appreciated.

Particular acknowledgment is made of the co-operation of the local newspapers in giving space for reports of the various lectures, and of the Carnegie Library in selecting and providing lists of books related to the lecture subjects on the Museum programs. Copies of these lists are made available at the Museum to any who are interested in doing supplementary reading.

LECTURE HALL

As in former years the Lecture Hall of the National Museum was made available to scientific, educational, government, and welfare organizations. Reservations of the Hall to meet these requirements numbered 136, and all necessary assistance was given by the Museum. The Hall has a seating capacity of 598, and has equipment for showing both 35 mm. and 16 mm. films, sound and silent, and lantern slides. Approximately 378,700 feet of film were shown in the Lecture Hall during the past 12 months.

EDUCATIONAL AIDS

By means of correspondence, publications, motion pictures, lantern slides, and photographs accurate and specialized knowledge on anthropology, biology, and other phases of the natural history of Canada was brought to many who could not otherwise obtain it.

One of the most popular and direct methods of spreading accurate information on these subjects is by means of motion pictures and coloured lantern slides, which were lent to Canadian educational institutions and other museums free of charge except for cost of transportation one way. Five new motion pictures were added to the loan library and a number were added as replacements of 16 mm. prints too worn from constant use to be of any value. One new loan set of slides was added during the year. Museum slides and motion pictures were seen by 67,414 persons during the year. As this figure is compiled from attendance records supplied by borrowers it cannot be considered a complete record, for many borrowers fail to furnish figures for attendance.

A large collection of photographs that have been taken by officers of the National Museum and Geological Survey furnishes a basis for the Museum's service to the public. Much time was given to the selection of photographs to illustrate scientific journals, school textbooks, and magazine and newspaper articles published in England and the United States, as well as in Canada.

**NATIONAL MUSEUM OF CANADA
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ANTHROPOLOGICAL DIVISION

D. Jenness, Chief of the Division, continued on loan to the Royal Canadian Air Force.

C. Marius Barbeau, Ethnologist, carried out research and photographic work at various times, mostly in Montreal, Quebec, Moncton, and neighbourhood. The parish archives of Berthier-en-haut were studied; Île-du-Pas was visited. The archives of Hotel-Dieu Québec, of Le Séminaire de Québec, and of Hotel-Dieu de Montréal, were consulted. A few days were spent on investigations and photographic work at the Odanak (Abenaki) Mission, Que. Visits were paid to several points in the neighbourhood of Montreal—all these trips were made in conjunction with a series of lectures given at the Université Laval and at the Université de Montréal.

Among the material collected were 30 folk-songs, 13 of them with melodies; two folk tales; about 175 photographs; much linguistic material; notes of all kinds in the archives; measurements of old silver; recipes for food and medicines; and a notebook of linguistic and folklore data from Mme Juliette Caron-Dupont. Six Cree (Indian) songs were recorded on the phonograph. The J. T. Leblanc collection of Acadian folk-songs, at Memramcook University, near Moncton, N.B., was made available. Photographs were taken of Indian delegates to meetings at Ottawa.

Two books by Dr. Barbeau were published, *L'Homme aux Trois Femmes* (Beauchemin, Montreal) and *Painters of Quebec* (Ryerson Press, Art Series, Toronto). Mimeographed summaries of lectures were issued by the Université Laval, *La Science de l'Homme*, and by the Université de Montréal, *Peau-Rouge*. Two new books were made ready for publication: *Ceinture fléchée* (Edition Paysana, Montreal), and *Alouette!*, a book of French Canadian folk-songs (Collection Humanitas, Montreal). A series of folklore articles was written and is being published in *Archives de*

Folklore, Montreal (Fides). A number of other articles were prepared or published elsewhere, in Canada and the United States. At the Université de Montréal, Université Laval, and Ottawa University 128 lectures were given on anthropology, folklore, and human geography.

Douglas Leechman conducted an archaeological reconnaissance along parts of the Alaska Highway in southwestern Yukon. Here he was successful in finding traces of a prehistoric migration route from Siberia into northwest America, which is believed, on geological evidence, to be roughly 4,000 years old. Attention had been drawn to this material by Mr. F. Johnson, of Andover, Mass., who visited the same area in 1944. A number of new sites and several new types of artifacts of this culture were discovered. On his way back from the Yukon, Dr. Leechman spent a few days in the neighbourhood of Winnipeg where archaeological investigations are being carried on by the Historical and Scientific Society of Manitoba. He prepared an article on the economic importance of the National Museum of Canada; an article on the distribution of rubbed slate implements in southern Ontario for the Royal Society of Canada; he edited a paper by J. A. Mason on the Dogrib Indians; and prepared a paper on the Aborigines of the Yukon for the Northwest Territories Branch of the Department of Mines and Resources. He began the preparation of his report on the material collected in the field and also prepared a plan for the expansion of the activities of the National Museum in field work and scientific research. He continued the compilation of archaeological data and answered numerous inquiries by mail and in interviews. He continued the supervision of the anthropological collections and added about 320 new specimens. He accessioned and catalogued all specimens added to the study collections, which now number 72,606. As each of these catalogue entries may represent a number of individual specimens, the collections now include something over a quarter of a million specimens.

Lectures and Papers

By Marius Barbeau:

The Human Geography of North America (series of ten evening lectures): The University of Ottawa, one each week in April and May 1945.

Canada Develops Modern Language Films. Paper, The Modern Language Journal, April 1945.

En quête de connaissances anthropologiques et folkloriques; Archives de Folklore, Laval Univ., Quebec, 82 pp., April 1945.

Poor Man's Route to Fortune; Family Herald and Weekly Star, Montreal, April 4, 1945.

Bear Mother. Paper and address. The Royal Society of Canada, May 22, 1945.

La confrérie de Sainte-Anne. Address. La Société Royale du Canada, May 22, 1945.

Henri Masson, peintre de l'Outaouais. Paper. Gants de Ciel, Montreal, June 1945.

Jardin de Melusine (folklore) summer session—series of 38 lectures, Université de Montréal, June 28 to Aug. 10, 1945.

La Chasse-Gallerie; Le beau danseur; La vache ensorcelée. Radio addresses. CBC "Canadian Yarn series" Montreal trans-Canada. Three Sundays in July 1945.

La Confrérie de Sainte-Anne. Address. Université Laval, Quebec, July 25, 1945.

Peintres anciens du Canada. Address. Université Laval, Quebec, July 26, 1945.

The Aleutian Route of Migration into America. Paper. The American Geographical Society of New York, July 1945.

V'là l'bon vent. Paper. La Terre et le Foyer, Quebec, July-August 1945.

"Le peau-rouge" (series of 2 lectures on folklore and anthropology—a summary; mimeographed). Addresses and Paper, Université de Montréal, Sept. 17, 1945-April 1946. Two every Monday.

The Three Oldest Canadian Landscapes. Paper. Canadian Review of Music and Art, Toronto. August-September 1945.

Vive la canadienne. Paper. La Terre et le Foyer, Quebec, September-October 1945.

Science de l'homme (series of 15 lectures). Université Laval, Quebec. October 1-21, 1945.

Le folklore dans les humanités. Address. ACFAS Annual Meeting, Montreal, October 12, 1945.

Canadian folklore. Paper. The French Folklore Bulletin, N.Y., November 1945.

Arts et métiers d'autrefois. Paper. Revue de l'Université d'Ottawa, October-December 1945.

Poussière de mes aieux, je te porte en chantant. Address. Votre auteur préféré. Bibliothèque de la ville de Montréal, December 3, 1945.

The Bell of Caughnawaga. Christmas Night at Tadoussac. Radio address. CBC "Canadian Yarn series", December 1945 (first three Sundays).

The Tree of Dreams.

The House that Mac Built. Paper. The Beaver, Winnipeg, December 1945.

L'homme aux trois femmes. Book. Editions Beauchemin, Montreal, December 1945.

The Bell of Caughnawaga. Address. Y.P.U. McLeod Street Church, December 23, 1945.

Les Baillaigé. Paper. Le Canada français, Quebec, December 1945.

Charles Hill-Tout. Paper. Trans., Royal Society of Canada, December 1945.

Bear Mother. Paper. Jour. of Am. Folklore, U.S., January 1946.

Folk-Songs of This Country. Address. West-End Y.W.C.A., Ottawa, February 14, 1946.

Saga of the St. Lawrence. Address. National Museum Series. February 1946.

Music of Our Town. Recital. Canadian Federation of Arts, Dominion Archives, February 21, 1946.

A Saint-Malo. Paper. La Terre et le Foyer, Quebec, February 1946.

Henri Masson. Paper. Canadian Art, February 1946.

Canadian Folklore II Folk Tales. Paper. The French Folklore Bulletin, N.Y., February-March 1946.

Painters of Quebec. Book. The Ryerson Press, Toronto, February 1946.

Si mon moine voulait danser. Paper. La Terre et le Foyer, Quebec, March 1946.

Louis Jobin, an Old Wood Carver. Paper. Canadian Review of Music and Art, Toronto, March 1946.

Louis Jobin, statuaire. Paper. Canadian Review of Music and Art, Toronto, March 1946.

La science de l'homme (series of 15 lectures). Laval University, Quebec, March 12-30, 1946.

Notre folklore. Address and paper. Le Cercle des Habitants, Quebec—CBV (network), March 16, 1946.

Le folklore à l'Université. Radio address. Le Quart-d'Heure Universitaire (Radio-Canada French network), March 24, 1946.

Musique dans notre folklore. Address and recital. Conservatoire de Musique, Quebec, March 26, 1946.

La Confrérie de Sainte-Anne. Paper. Mémoires de la Société royale du Canada, March 1946.

By Douglas Leechman:

- The Distribution of Rubbed Slate Implements in Eastern Canada; Royal Society of Canada, May 22, 1945.
- The Savages of James Bay; The Beaver, June 1945.
- Sidelights on the Highway; Civil Service Review, September 1945.
- The Alaska Highway; High School of Commerce, Ottawa, November 22, 1945.
- Cross Country Trek; White Horse Star, December 21, 1945.
- The National Museum of Canada; Canadian Geographical Journal, January 1946.
- Eskimo Summer; The Ryerson Press, March 1946.

Accessions

BY PURCHASE

- Mme Josephine Baril, Bonnyville, Alta.:*
Two ceintures fléchées.
- Holt, Renfrew and Co., Quebec, Que.:*
Seven ceintures fléchées.
- A. H. D. Ross, Ottawa, Ont.:*
Prairie Indian beadwork.
- A. W. G. Wilson, Ottawa, Ont.:*
Yukon and British Columbia Coast Indian specimens.

FROM THE STAFF

- By Douglas Leechman:*
Archæological material from the Yukon.
Ethnological material from the Yukon.
Archæological material from Winnipeg, Man.

BY DONATION

- Mrs. G. S. Betts, Ottawa, Ont.:*
Prairie Indian leggings and knife sheath.
- W. H. Bryenton, Edmonton, Alta.:*
Bone lance head from Flin Flon, Man.
- F. L. Coombs, Ottawa, Ont.:*
Stone net weight from Constance Bay, Ont.
- Mrs. R. Kilpatrick, Legend, Alta.:*
Chipped stone arrowpoint from Legend, Alta.
- Mylo MacCallum, Lacolle, Que.:*
Archæological material from Lacolle, Quebec, and from Kentucky.

BIOLOGICAL DIVISION

R. M. Anderson, Chief of the Division, retired on superannuation on December 30, and A. L. Rand, associate zoologist, was placed in temporary charge of the Division. D. Blakely, taxidermist, started retirement leave on September 23, and the staff was further depleted by the death on July 14 of J. E. Perron, Museum helper-tanner.

R. M. Anderson completed and submitted for publication his "Catalogue of Canadian Recent Mammals". Various points arising out of the preparation of this work were developed in shorter papers.

Requests for information on a great many aspects of natural history were met, notably one from the National Parks Bureau regarding the pronghorn antelope, which required the preparation of a comprehensive

report. Various specimens were identified for individuals. Research on mammals, especially those of Alberta and Northwest Territories, was actively prosecuted, together with a general survey of Canadian mammals.

A. L. Rand completed his accounts of "Yukon Mammals", "Mammal Investigation on the Canol Road", and "Mammals of the Ottawa District", which were published. He prepared a comprehensive report on the status of the pronghorn antelope and continued work on "Mammals of Alberta". Four summer months were spent by him in the field, during which time, in addition to notes and photographs, many southern Alberta and Saskatchewan mammal specimens were taken.

C. L. Patch, Chief Taxidermist and Herpetologist, modelled replicas of great auks and their eggs and placed them on exhibition in a group; designed a portable habitat group for school loans, and had one constructed which included miniature carved figures of black bears; made a scale model of a case for habitat groups; and collected and prepared a number of mammals and birds for exhibition and for the study and loan collections. He arranged and exhibited a collection of paintings of the larger mammals by the late Allan Brooks; and arranged birds in four exhibition cases for display to local school classes (estimated attendance 1,200 pupils).

C. E. Johnson, Collector-preparator Specialist, made casts of skulls; completed the accessories and background for a miniature habitat group for school loan; and prepared many illustrations for reports.

D. Blakely, Taxidermist, was occupied until his retirement in preparing specimens received, and in relaxing salted material received from the field and preparing it as permanent study material. He remade some old material into more usable specimens.

R. W. Hawkins, Museum-helper Tanner, since his appointment on January 8, has prepared osteological material for the study collections.

Lecture

By C. L. Patch:

"Amphibians and Reptiles"; Borden Public School, Ottawa, May 1, 1945.

Publications

By R. M. Anderson:

Three Mammals of the Weasel Family (Mustelidae) added to the Quebec list with descriptions of two new forms; Ann. Rept. 1944, Provencher Soc. Nat. Hist., Quebec, pp. 56-61 (also in French on pages 62-68).

Summary of Canadian Black Bears with descriptions of two new northwestern species; Ann. Rept. 1944, Provencher Soc. Nat. Hist., Quebec, pp. 17-33 (also in French on pp. 34-52).

By R. M. Anderson and A. L. Rand:

A New Form of Dusky Shrew from the Prairie Provinces of Canada; Canadian Field-Nat., pp. 47-48, March-April 1945.

A New Shrew from Arctic North America; Canadian Field-Nat., pp. 62-64, March-April 1945.

The Varying Lemming of the genus *Dicrostonyx* in Canada; Jour. Mammal., pp. 301-306, Aug. 1945.

By A. L. Rand:

Mammals of Yukon; Nat. Mus., Canada, Bull. 100, 93 pp.

Mammal Investigations on the Canol Road, 1944; Nat. Mus., Canada, Bull. 99.

Mammals of the Ottawa District; Canadian Field-Nat., vol. 59, pp. 111-132.
 Lesser Known Ottawa Mammals; Canadian Field-Nat., vol. 59, pp. 133-135 (with illustrations by C. E. Johnson).

Accessions

MAMMALS

R. W. Bryenton, Herb Lake, Man.: One northern water shrew, one muskrat.
 Mrs. G. H. Brooks, Brockville, Ont.: One duck-billed platypus.
 Preston Staley, Whitefish, Ont.: One white-footed mouse, two meadow mice.
 Dr. Robert T. Hatt, Bloomfield Hills, Mich., U.S.A.: One black bear mandibles.
 Dr. Ian McT. Cowan, Vancouver, B.C.: Seven mammals from north coast islands, B.C.
 Mrs. I. M. Priestly, Yorkton, Sask.: One hoary bat.
 J. Dewey Soper, Winnipeg, Man.: Ten mammals from Wood Buffalo Park, Alta.
 Harry Cheney, Ottawa, Ont.: Four mammals from Larimac, Que.
 W. H. Bryenton, Herb Lake, Man.: 84 mammals from Manitoba.
 R. F. Morris, Edmundston, N.B.: 15 mammals from New Brunswick.
 Fred MacLennan, Canol Road, Yukon: One red squirrel.
 David C. Barr, Sherridon, Man.: One skull and antlers of moose.
 T. H. Manning, Ottawa, Ont.: 61 mammals from Northwest Territories and northern Manitoba.
 R. C. Clement, New York, N.Y.: One Labrador porcupine.
 Dr. O. H. Hewitt, Ottawa, Ont.: One eastern Canada porcupine.
 J. V. Butterworth, Ottawa, Ont.: One ground squirrel.
 F. A. Dunk, Regina, Sask.: One timber wolf, one porcupine.
 R. W. Tufts, Wolfville, N.S.: One eastern Canada otter.
 H. U. Green, Banff, Alta.: 17 mammals from Banff National Park, Alta.
 Mrs. J. Hubbard, Grenfell, Sask.: One shrew.
 F. Fraser, Ottawa, Ont.: One big brown bat.
 Henry Voisie, Keewatin district, N.W.T.: 18 mammals from Northwest Territories.
 Dr. J. W. Groves, Ottawa, Ont.: One shrew.
 Frank Farley, Camrose, Alta.: One least weasel.
 D. J. Martin, Supt., R.C.M.P., Mackenzie District, N.W.T.: Three shrews.
 H. S. Jones, Eastend, Sask.: Two crania of grizzly bear.
 Dr. Hugh S. Bostock, Ottawa, Ont.: Horns and skull of mountain goat.
 Oscar F. Adami, Fort Selkirk, Yukon: One least weasel.
 Dr. Douglas Leechman, Ottawa, Ont.: One black gopher.
 Major Box, Ottawa, Ont.: One white-tailed deer, mounted head.
 Maurice Coy, Kinistino, Sask.: One shrew.
 Donald Griffin, Plymouth Union, Vermont, U.S.A.: Two bats.
 R. R. Chambers, Whitehorse, Yukon: 2 grizzly bears.
 Thomas Mould, Fort Nelson, B.C.: One wolverine.
 A. LaRocque, Ottawa, Ont.: One big brown bat.
 C. L. Patch, Ottawa, Ont.: Six mammals from the Ottawa district.
 Dr. A. L. Rand, Ottawa, Ont.: 442 mammals from Alberta and Saskatchewan, 25 from Ontario, 3 from Nova Scotia.

AMPHIBIANS AND REPTILES

L. D. Burling, Ottawa, Ont.: One garter snake.
 Stuart Criddle, Treesbank, Man.: One toad.
 Theo Dorion, Cascades, Que.: One tree frog.
 Sylvia Frith, Ottawa, Ont.: One mud turtle.

C. E. Johnson, Ottawa, Ont.: One green snake and red-bellied snake.
 Mrs. Isabel M. Priestly, Yorkton, Sask.: One tiger salamander, one Canadian toad.
 R. M. Rand, Ottawa, Ont.: One spotted salamander.
 J. S. Robitaille, Jacques Cartier co., Que.: One mud puppy.
 Dr. A. L. Rand, Ottawa, Ont.: 22 amphibians and reptiles from Alberta.

ORNITHOLOGICAL DIVISION

A. L. Rand divided his time between the Ornithological and the Biological Divisions. In addition to answering various requests for information, and identifying specimens for individuals, he prepared and submitted for publication a distribution list of Yukon birds and continued work on a report on the birds of Alberta, and on a list of Greenland birds in the National Museum. During 4 summer months in the field he collected many notes, photographs, and 385 specimens of Alberta birds.

Among the notable accessions received during the year is a collection of sea birds made many years ago by William Spreadborough. These were transferred, through R. E. Foerster, from the Nanaimo Fisheries Station.

Publications

By A. L. Rand:

"Some Familiar Canadian Birds"; The Educational Record of the Province of Quebec, pp. 88-93, April-June 1945. (Report of mimeographed release.)
 "A Northern Record of the Flicker and a note on the Cline"; Canadian Field-Nat., vol. 58, pp. 183-184.
 "Kentucky Warbler at Point Pelee, Ontario"; Canadian Field-Nat., vol. 59, p. 70.
 "Northern Records of the Magpie, *Pica pica hudsonia* Sabine"; Canadian Field-Nat., vol. 59, p. 45.
 "The Green-tailed Towhee, *Oberholseria chlorura*, in Saskatchewan"; Canadian Field-Nat., vol. 59, p. 44.
 "Hungarian Partridge in the Ottawa-Montreal area"; Canadian Field-Nat., vol. 59, pp. 26, 27.

Accessions

James Mark, Eastmain, Que.: One Canada goose, one magpie.
 Dr. R. E. DeLury, Ottawa, Ont.: One eastern belted kingfisher.
 Dr. O. H. Hewitt, Ottawa, Ont.: One snowy owl.
 J. Purcell, Cobden, Ont.: One snowy owl.
 R. E. Foerster, Nanaimo, B.C.: 49 birds from British Columbia.
 C. L. Patch, Ottawa, Ont.: Six birds from Ottawa district.
 Stuart Criddle, Treesbank, Man.: One Richardson's owl.
 Dr. C. S. Lord, Ottawa, Ont.: One spruce grouse.
 A. Bourguignon, Britannia, Ont.: One purple martin, two turnstones.
 R. W. Hawkins, Ottawa, Ont.: 32 birds from Alberta.
 D. F. Stedman, Ottawa, Ont.: One pine grosbeak.
 D. Blakely, Ottawa, Ont.: 17 birds from vicinity of Ottawa.
 Miss Melburn, Ottawa, Ont.: One screech owl.
 George Sterling, Ottawa, Ont.: One screech owl.
 Frank Farley, Camrose, Alta.: One horned lark.
 Ernest Storto, Ottawa, Ont.: One English sparrow.

Dr. A. L. Rand, Ottawa: 385 birds from Alberta.

Royal Ontario Museum of Zoology, Toronto, Ont.: Six birds from Ontario.

Mrs. L. de K. Lawrence, Rutherglen, Ont.: One Canada jay.

NATIONAL HERBARIUM

A. E. Porsild, Botanist in charge of the Herbarium, was a Canadian delegate to a scientific congress held in Moscow from June 15 to July 2, in connection with the celebration of the 220th anniversary of the Academy of Sciences of the U.S.S.R. Following the Moscow meeting he spent 2 weeks in Sweden studying Swedish methods of forest and wild life management. To reach Moscow he travelled by air via Alaska and Siberia, returning to Ottawa on July 28 via the Atlantic. From August 1 to October 3, assisted by A. J. Breitung of McKague, Sask., he made a survey of the flora of Banff National Park and made reconnaissance trips to Jasper, Kootenay, and Waterton Lakes Parks. At the end of the season he visited the provincial herbaria in Vancouver and Victoria. His survey of Banff Park resulted in a collection of 10,000 plant specimens, numerous ecological and taxonomical notes, and colour photographs.

He prepared a 150-page typewritten report on the Moscow meeting and on his trip through Siberia and Sweden, and made a summary of it, illustrated by photographs taken during the trip, for publication in the Canadian Geographical Journal. His paper, "Plant Life in the Arctic", was prepared for the manual, "The North American Arctic", which is being planned by the North American Arctic Institute. He made considerable progress on his monograph on the flora of southeastern Yukon, and delivered several addresses.

During the year, 263 requests for technical information were dealt with by correspondence; and 111 visitors from Canada and abroad consulted the collections in the Herbarium in quest of special information.

Herbarium specimens received by exchange totalled 1,740, and by donation, 797; 5,217 specimens were distributed to other herbaria on exchange, 987 were lent, and 72 were borrowed from other herbaria.

Miss H. T. Harkness, Herbarium Assistant, mounted and inserted 4,795 herbarium specimens, bringing the total number of filed specimens in the National Herbarium to 176,630. She filed four issues of the Gray Herbarium Index and repaired 1,400 mounted sheets in the Herbarium.

To relieve serious overcrowding in the herbarium cases, the entire collection of Canadian plants was rearranged, after the addition of six cases.

Lectures

By A. E. Porsild:

A Journey through Siberia and Russia; The Edmonton Chamber of Commerce, Edmonton, Alta., Sept. 24, 1945.

A Journey through Siberia and Russia; The Dept. of Geography, University of Toronto, Ont., Dec. 7, 1945.

A Journey through Siberia and Russia; Grove School, Lakefield, Ont., Dec. 9, 1945.

A talk on Russia, to staff members of the Royal Canadian Air Force, Ottawa, Ont., Nov. 23, 1945.

A talk on his trip to Russia; Ottawa Field-Naturalists' Club, Nov. 15, 1945.
 A Scientist goes to Moscow; Annual Meeting of the Canadian Geographical Society, at the National Museum, Feb. 22, 1946.

Publications

By A. E. Porsild:

- "The Alpine Flora of the East Slope of Mackenzie Mountains, Northwest Territories"; Nat. Mus., Canada, Bull. 101.
- "A Survey of the Adventitious flora of Ivigtut in southwest Greenland"; Canadian Field-Nat., vol. 59, pp. 53-59.

PLANTS

Accessions

By Gift:

- C. H. Crickmay, Haney, B.C.: 42 plants from Franklin Mountains, Northwest Territories.
- Dartmouth College, Hanover, N.H.: 64 plants from Greenland.
- C. Heimburger, Ottawa: 4 plants.
- Rev. Ernest Lepage, Rimouski, Que.: 115 plants from east coast of James Bay.
- Dr. C. S. Lord, Geological Survey, Ottawa: 2 specimens of *Abies lasiocarpa*.
- W. C. McCalla, Calgary, Alta.: 5 *Viola vallicola*.
- Dr. N. Polunin, Oxford, England: 28 plants from the Canadian Arctic Archipelago.
- Dr. M. P. Porsild, Godhavn, Greenland: 512 plants from Eurasia, Greenland, and U.S.
- Dr. Geo. H. Turner, Fort Saskatchewan, Alta.: 25 plants.
- University of Alberta, Edmonton: 182 plants.

By Exchange:

- New York Botanical Garden, N.Y.: 54 plants.
- University of Washington, Seattle, Wash.: 830 plants from western U.S.
- Botanical Institute, Uppsala, Sweden: 174 plants from U.S. and Canada.
- State College of Washington, Pullman, Wash.: 500 plants from Alberta, British Columbia, and Pacific northwest states.

EDUCATIONAL WORK

National Museum educational activities were maintained at a high level in spite of the disadvantage caused by the closing of exhibition halls owing to the war-time need for office and storage space. Every effort was made to permit students and others to make as full use as possible of the material in such sections of the Museum exhibition halls as were accessible. Special educational exhibits were arranged by the scientific staff for organized study groups, one of which had an attendance of 6,200. The exhibition halls were visited by 153,116 persons, including teachers, students, members of the armed forces, and the general public. Other Museum activities were attended by 69,934 persons, making a total attendance of 223,050. The attendance was somewhat larger than that of the previous year, owing in part to more favourable transportation facilities, which is indicative of the sustained public interest in Museum displays and activities.

As formerly, a great deal of Museum material on anthropology, biology, and other phases of the natural history of Canada has gone to

teachers, students, and other persons in all parts of Canada. One of the most popular and direct methods of spreading information on these subjects is by means of motion pictures and lantern slides, which were lent to Canadian educational institutions and other museums free of charge, except for cost of transportation one way. Replacements were made of all the 16 mm. prints in the loan library too worn from constant use to be of any value. Museum slides and films were seen by 68,213 persons. As this figure is compiled from attendance records supplied by borrowers, it cannot be considered a complete record, for many borrowers fail to comply with the request for this information.

A large collection of photographs taken by officers of the National Museum and Geological Survey furnished a basis for the Museum's service to the public. Much time was given to the selection of photographs to illustrate scientific journals, school textbooks, and magazine and newspaper articles published in England, the United States, and Canada.

GEOLOGY AND MINERALOGY (Geological Survey)

The Geological Survey maintains a mineral exhibit in the Museum arranged in twenty-one separate cases, each designed to illustrate some particular feature, such as, what minerals are, how they occur, their crystal forms, colours, physical properties, chemical composition, and economic value. Collections of mineral and rock specimens available for distribution to the public for educational purposes are also on display in this exhibit. Altogether 2,363 collections, numbering 89,853 specimens, were prepared and sold during the fiscal year.

PALÆONTOLOGY (Geological Survey)

The Palæontological Section of the Geological Survey has charge of the exhibits in the Vertebrate Palæontological Hall, as well as of cases of invertebrate fossils distributed elsewhere on the main floor of the Museum. The Vertebrate Hall has recently been rearranged to offer better facilities for viewing the exhibits, which comprise fishes, amphibians, reptiles (dinosaurs, marine reptiles, turtles, crocodiles, and flying reptiles), fossil birds, and mammals. A fossil forest display is included in the northeast alcove of the hall.

NATIONAL MUSEUM LECTURES

The National Museum presented the annual series of public educational lectures and motion picture programs on natural history and related subjects, as well as topics of current social interest. The series, which continued last year to grow in popularity and attracted capacity audiences, is organized by a committee composed of: Dr. M. E. Wilson, Chairman, C. L. Patch, M. F. Goudge, Dr. F. J. Alcock, Dr. Marius Barbeau, and Miss M. Godwin, Secretary. The program of the 1945-46 season follows:

Call of the Wilderness.

India in the British Commonwealth and Empire. By Sir Frederick Puckle, K.C.I.E., C.S.I., Adviser on Indian Affairs to the British Embassy, Washington, D.C., U.S.A.

Road to Recovery. Motion Pictures.

The Story of DDT. By Dr. C. R. Twinn, Division of Entomology, Science Service, Dept. of Agriculture, Ottawa.

Australia. By Thomas Dunbabin, Press Attaché, Australian High Commissioner's Office, Ottawa.

Recent Glimpses of Europe. By M. F. Goudge, Bureau of Mines, Dept. of Mines and Resources, Ottawa.

Saga of the St. Lawrence. By Dr. Marius Barbeau, National Museum of Canada, Dept. of Mines and Resources, Ottawa.

Yukon Trails. By H. S. Bostock, Ph.D., Geological Survey, Dept. of Mines and Resources, Ottawa.

Danger! Firearms and Explosives. By Inspector J. A. Churchman, R.C.M.P., Ottawa.

Atomic Energy. By Squadron Leader Peter M. Millman, Division of Research and Development, R.C.A.F., Ottawa.

From the Prairies to the Sea. By J. M. Humphrey, Travelogue-Lecturer, Vancouver, B.C..

Fishways of the Fraser. By Tom Reid, M.P., Commissioner, International Pacific Fisheries Commission, New Westminster, B.C.

Sweden (A Motion Picture Program). The program was introduced by His Excellency, Per Wijkman, Minister of Sweden, Ottawa.

As a special event a Film Festival was held on the evenings of February 4, 5, and 6, at which there was a large attendance. Ten of the more outstanding documentary films were shown under the following general headings:

- Canada through the Camera's Eye.
- Britain Looks Forward.
- China Today.

The total attendance at all lectures and motion picture programs was 8,620 school children and 8,175 adults. Members of the Canadian Boy Scouts Association acted as ushers during the children's lectures, as did also the Sea Cadets. Their co-operation, as well as that of the Royal Canadian Mounted Police, is appreciated.

Particular acknowledgment is made of the co-operation of the local newspapers in reporting the various lectures, and of the Ottawa Public Library in selecting and providing lists of books related to the lecture subjects on the Museum programs. Copies of these lists were made available at the Museum to all who were interested in supplementary reading.

The gift of a motion picture on the Koala bear, "Teddy Bear's Picnic" by the Australian High Commissioner's Office at Ottawa, for use on children's programs is acknowledged with thanks.

LECTURE HALL

The Lecture Hall was made available to scientific, educational, government and welfare organizations, and 133 reservations were made. The Hall has a seating capacity of 598, and has equipment for showing both 35 mm. and 16 mm. films, sound and silent, and lantern slides. There was a total attendance of 45,939 persons at the meetings held in the Hall, and approximately 461,500 feet of film were shown.

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ANTHROPOLOGICAL DIVISION

D. Jenness, Chief of the Division, continued on loan to the Royal Canadian Air Force.

C. Marius Barbeau carried out field work, chiefly in the lower St. Lawrence region, from early August to the end of September and partly because of the help of field assistants a very large amount of information was collected. These assistants included Professors Luc Lacourcière and abbé Félix-Antoine Savard, of Laval University, Marcel Rioux, a student of anthropology and folklore, Miss Madeleine Doyon, of Laval University, and Mme Juliette Caron-Dupont, librarian. The districts surveyed were from Tadoussac northeastwards, Charlevoix county, the Matapedia Valley, Beauce county, l'Islet, and other parts of the St. Lawrence from Quebec city up. To the results obtained through field research are to be added varied folklore materials in the form of examination papers by the students of Montreal and Laval University at the final examinations at the end of the year or at the summer lectures.

The already large folklore collections of the National Museum have been increased by 745 folk-song texts, and 312 melodies recorded mostly on the phonograph or on Victor records. This brings up the total of our folk-song collections to 9,370 folk-song texts, of which 5,312 melodies have been recorded on the phonograph or in script. The considerable collection of folk tales and legends, consisting of a few hundred items, has been increased by more than 80 numbers. To games and roundelay are to be added about 75 numbers. Rhymes, ditties, proverbs, brought in about 500 items; "Blason populaire" or nicknames, more than 500; reminiscences, stories, about 75; photographs taken or received, 450. Various materials

consisted of information on costume, personalities or characters, recipes and folk remedies, technology, arts and crafts, old silver, language, parish archives.

Thirty-six specimens were purchased on the lower St. Lawrence, including an Indian drum.

Four books appeared: *Ceinture fléchée* (Paysana); *Saintes artisanes III, Mille petites adresses* (Fides); *Alouette!* (Collection Humanitas, Editions Lumen); *Alaska Beckons* (Caxton in U.S. and Macmillan in Canada). *Come a Singing! —Canadian folk-songs* is about to appear as a Bulletin of the National Museum.

Manuscripts for books were made ready for publication: *Krieghoff Discovers Canada* (The Art Series, Ryerson Press); the manuscript of *Sirens of the North*, a companion book to *Alaska Beckons*, was improved and submitted to the publishers. The first chapters of *North Americans, Their Backgrounds* were written. Several manuscripts for books, prepared in former years, are awaiting their turn at the publishers, a few of them scheduled for this coming year.

Collaboration in the founding of the Corporation des Folkloristes, and a few articles in the first two numbers of *Archives de Folklore* are another contribution to folklore.

One hundred and forty-six lectures on folklore and anthropology were given during the academic year, and during the summer courses, at Montreal and Laval Universities—133 in all; and before other organizations in Canada and the United States 14; bringing the total up to 147.

An important exhibition of *Arts of French Canada 1613-1815* was organized with Dr. E. P. Richardson, and inaugurated in Sept. 1946 at the Detroit Art Institute. It was given, since, at the Cleveland Museum of Art, at the Albany Institute of History and Art, at the Art Association of Montreal, and is to take place in April at the National Gallery of Canada, and in May at Le Musée de la Province de Québec.

The reproductions on flat Victor disks of about 500 folk-songs of French Canada from our collections, which had been on loan for this purpose, were received from the Library of Congress, Washington.

The invitation from the Secretary of State to be a member of the committee for UNESCO and to attend the meetings in Ottawa, to advise the Government, was accepted. Mr. Marcel Rioux, field assistant for the National Museum during the summer of 1946, was authorized to attend, as a representative of the Museum, the meetings of the International Council of Museums of UNESCO, held in Paris in November 1946.

Assistance and advice were given to Mlle Genevieve Massignon, a scholar of the French Government, in her linguistic and folklore work among the Acadians of Canada.

Advice was also asked for and given to the Ursuline nuns in Quebec city in the organization of their museum and archives.

Douglas Leechman continued his study of the Cape Dorset Eskimo culture, a subject to which he has devoted several years and which is now approaching its final stages. He also spent some time in the study of archaeological specimens collected in the Yukon in 1945 while tracing the old migration routes from Siberia into North America.

On May 20 he left Ottawa for a second season's field work in the Yukon, returning on September 20. During these 4 months he visited museums at Banff, Vancouver, Prince Rupert, and Juneau, Alaska, on his way to the field. He spent six weeks in Old Crow, the most northerly settlement in that territory, where he collected both archaeological and ethnological material. On his way back he visited an archaeological site and the museum at Fairbanks, Alaska; did further work near Whitehorse and then proceeded to Carcross, Yukon, on his way home. During this period he collected a series of freshwater shells which, added to those collected in 1945, have been sent to a specialist for study and report. On three occasions he visited the prehistoric Iroquois site at Roebuck near Ottawa. He also visited Cobden, Constance Bay, and Tar Island, all in Ontario. On each of these occasions small collections of archaeological material were made. In the week between Christmas and New Years he attended a convention of anthropological societies at Chicago.

Several papers were prepared for publication, including one on Prehistoric Migration Routes which was read to the Royal Society of Canada and subsequently published in the Canadian Historical Review; a collection of five folk tales from the Loucheux, collected at Old Crow during the summer, to be published in the Journal of American Folklore; and a paper on the National Museum of Canada which he read as a radio talk from station CKCO in Ottawa.

Dr. Gutrun Gjessing, an eminent Norwegian archaeologist from Oslo, spent some weeks studying the petroglyphs and pictographs recorded in our archaeological files, and a number of other visitors and scientists made use of our collections of material and information. In response to the request from the National Film Board a one-reel film describing the life of the Eskimos was checked for scientific accuracy and a large number of inquiries were answered either by mail or in person. He also arranged a series of temporary exhibits in the main entrance hall of the Museum. He continued the compiling of the Archaeological File, the Bibliography of Canadian Archaeology, and other permanent records; he continued the supervision of the anthropological collections and supervised all other activities of the Division of Archaeology.

Papers and Addresses

By Douglas Leechman:

Prehistoric Migration Routes through the Yukon; Royal Society of Canada, May 21, 1946.

Prehistoric Migration Routes through the Yukon; Canadian Historical Rev., December 1946.

Youth Hostels in Canada; Canadian Geographical Journal, August 1946.

The Reddis of the Bison Hills (review); Canadian Geographical Journal, October 1946.

The Yukon Territory; West End Book Club, October 8, 1946.

Books and the War; Lions' Club, November 6, 1946.

Travels in the Yukon; High School of Commerce, January 16, 1947.

The National Museum of Canada; CKCO, Ottawa, March 16, 1947.

Accessions

BY PURCHASE

Mrs. A. M. Beale, Rockcliffe, Ont.:
Collection of Prairie Indian specimens.

Miss Sarah Stevenson, Ottawa, Ont.:
Collection of British Columbia Indian specimens.

Miss Helen Anderson, Ottawa, Ont.:
Three Indian baskets.

FROM THE STAFF

By Douglas Leechman:

- Archæological specimens from Tar Island, Ont.
- Archæological specimens from Roebuck, Ont.
- Archæological specimens from Constance Bay, Ont.
- Archæological specimens from Cobden, Ont.
- Archæological specimens from Banff, Alta.
- Archæological specimens from Yukon.
- Ethnological specimens from Yukon.
- Archæological specimens from Eagle, Alaska.

BY DONATION

The Hon. Charles Arthur Banks, C.M.G., Victoria, B.C.:
Series of gold fish-hooks from Colombia, South America.

Walter B. Cole, Ottawa, Ont.:
Pair of Indian snowshoes from Moisie, Que.

Karl Paulsen, Carmacks, Yukon:
Piece of mineralized bone from Nansen Creek, Yukon.

Richard White, Nain, Labrador:
Small collection of Nasipi Indian specimens.

Miss Margaret Oldenburg, St. Paul, Minn.:
Eskimo archer's bracer from Pelly Bay, N.W.T.

Dr. E. D. Kindle, Ottawa, Ont.:
Chipped stone specimens from Taye Lake, Yukon.

H. Groh, Ottawa, Ont.:
Rubbed slate "ice-chisel" from Luskville, Que.

Estate of the late F. Lambert:
Bow and six arrows from northern British Columbia.

Mrs. Raymond Kilpatrick, Legend, Alta.:
Chipped stone point from Legend, Alta.

Balaam Jhudi, Old Crow, Yukon:
Crude stone hammer from Old Crow, Yukon.

BIOLOGICAL DIVISION

The study collections were moved to more spacious quarters on the fourth floor of the Museum building, where they are now adequately housed and easily available for study.

Exhibition made considerably more progress than in recent years. Four cases were prepared for habitat groups and work progressed well on one which will represent a group of beaver at home. A miniature fox group was constructed to illustrate the proposed contents of another case. One group illustrating birds as solar machines was installed.

Research included investigations of the birds and mammals of several areas, and the preparation of guides and indexes to the mammals, birds, reptiles, and amphibians of Canada to make available to students and the people of Canada definite information on their fauna.

A. L. Rand divided his time between the Biological and the Ornithological Divisions. In addition to his routine curatorial duties, he completed and published "Some Canadian Fur Bearers", and "The 1945 Status of the Pronghorn Antelope, *Antilocapra americana* (Ord), in Canada". "The Mammals of Alberta" was completed and submitted for publication. "A Report on the mammals of Central Manitoba" and one on the "Status of Canadian Mammals" were prepared for publication, and he made considerable progress on a "Synopsis of Canadian Mammals". From April 18 to 20, he attended the annual meeting at Pittsburgh, Pa., of the American Society of Mammalogists.

C. L. Patch, Technician, in addition to curatorial duties in connection with reptiles and amphibians and alcoholic material, undertook with the assistance of two labourers the very important task of renovating the large mammal skin collection, and rearranging the alcoholic specimens and skulls in storage in the basement. He planned and supervised the construction of four cases for display habitat groups, conducted field work for additional material for the beaver group, and supervised the installation of this group which is well under way.

A start was made on the catalogue of reptiles and amphibians in the National Museum, intended as a reference work of interest to all students. School loans and teaching facilities for local schools were provided for by him as usual.

C. E. Johnson, Technician, devoted part of his activities to line and colour illustrations for "Mammals of Alberta"; part to illustrations for a pamphlet on "Some Canadian Fur Bearers"; and part to field sketches for the beaver group background, and to the painting of this background.

C. L. Thacker, Assistant Technician, who reported for duty on September 25, 1946, assisted in field collecting of beaver group material and devoted most of his time to making accessories for the beaver group.

R. W. Hawkins, Assistant Technician, participated in field collecting of material for the beaver group; collected many birds and some mammals locally; did considerable cataloguing, cared for the collections, prepared skins and skeletal material; made the plans for the layout of the new biology quarters; and prepared one exhibition panel, "Birds are Solar Machines".

C. E. Hall, Zoologist, employed for the month of October 1946, reviewed the species *Zapus hudsonicus*. Also, he prepared a list of Manitoba mammals.

Lectures

By A. L. Rand:

Introduction to showing of film "Java Bali Report"; Museum Lecture series, Nov. 20, 1946.

"Mice—Our Relatives"; Professional Women's Institute, No. 25, 1946.

"Bears and Their Relatives"; Introducing films, Museum Lecture Series, Feb. 8, 1947.

Publications

By R. M. Anderson:

"Catalogue of Canadian Recent Mammals;" Nat. Mus., Canada, Bull. No. 102, Biol. Ser. 31, pp. 1-238, 1 fig.

By A. L. Rand:

"Some Canadian Fur Bearers"; Nat. Mus., Canada, Special Contrib. No. 46-1, pp. 1-20, 16 figs.

"The 1945 Status of the Pronghorn Antelope, *Antilocapra americana* (Ord), in Canada"; Nat. Mus., Canada, Bull. No. 106, Biol. Ser. No. 34, 1-34, 7 figs.

Accessions

MAMMALS

Frank Banfield, Aklavik, N.W.T.: 14 mammals from Aklavik, N.W.T.
 W. H. Bryenton, Island Lake, Sask.: 62 mammals from Saskatchewan.
 M. W. Curtiss, Beckett's Landing, Ont.: One red fox.
 M. J. Dunbar, McGill University, Montreal, Que.: 29 mammals from Greenland.
 R. L. Edwards, Hamilton, N.Y., U.S.A.: Eight mammals from North Carolina, U.S.A.
 F. Frazer, Ottawa, Ont.: One eastern muskrat.
 Roland W. Hawkins, Ottawa, Ont.: Six mammals from Blue Sea Lake, Que.
 O. E. Heaslip, Wasagaming, Manitoba: One wolf.
 F. C. Hirtle, Fredericton, N.B.: One meadow mouse.
 E. W. Jamesson, Ithaca, N.Y., U.S.A.: One pine mouse.
 Revell Johnson, Ottawa, Ont.: One woodchuck.
 T. H. Manning, Ottawa, Ont.: One wolf, one red-backed mouse.
 E. R. Martell, Fallowfield, Indiana, U.S.A.: Two little short-tailed shrews.
 Oliver Norris-Elye, Winnipeg, Man.: 13 mammals from Yukon territory; 13 skulls, 11 skins.
 National Parks Bureau, Ottawa, Ont.: Nine mammals from Banff, Jasper, and Waterton Lakes National Parks, Alta.
 R. A. Outhet, Mount Tremblant, Que.: One lemming mouse, one Brewer's mole.
 William Richardson, South March, Ont.: One coyote.
 A. L. Wilk, and P. Orkin (Museum field party): 146 mammals from Lake St. John area, Que.
 J. Windsor, Ottawa, Ont.: Four mammals from Ottawa district.
 P. A. Taverner, Ottawa, Ont.: One hairy-tailed mole.

AMPHIBIANS AND REPTILES

Roger Bidwell, Halifax, N.S.: Six amphibians and reptiles from Nova Scotia.
 W. P. Daly, Ottawa, Ont.: One milk snake.
 C. E. Hall, Iron Hill and Knowlton, Que.: Three salamanders.
 Robert Hunter, High Lake, Man.: One western painted turtle.
 C. E. Johnson, Ottawa, Ont.: Two green snakes.
 Revell Johnson, Ottawa, Ont.: Two wood turtles.
 H. R. Lee, Chelsea, Que.: One milk snake.
 P. A. Orkin, Roberval, Que.: One Jefferson salamander.
 R. Ramsey, Aylmer, Que.: One garter snake.
 P. V. Rosewarne, Ottawa, Ont.: One milk snake.

ORNITHOLOGICAL DIVISION

The study collection was moved to the fourth floor of the Museum building where it is now adequately housed and much more easily available for study.

A Museum field party, under the leadership of A. L. Wilk, made a survey of the bird and mammal fauna of the Lake St. John, Quebec, region. Local field work was carried on intermittently by the staff.

A. L. Rand, divided his time between the Ornithological and the Biological Divisions. He completed and published a "List of Yukon Birds and those of the Canol Road", and brought "The Birds of Southern Alberta" well along toward completion. He made progress on a distributional list of Canadian birds, and prepared a sheet on Canadian waterfowl for

Museum distribution. Several short papers were prepared. He surveyed the bird collections at the Redpath Museum, Montreal, and prepared a report on it for McGill University. He attended the annual meeting at Urbana, Illinois, of the American Ornithologists' Union, from September 1-6, 1946.

W. Earl Godfrey, Zoologist, reported for duty on February 5, 1947. In addition to routine curatorial duties, he made considerable progress in bringing accumulated bibliographical work up to date. He began the preparation of "The Birds of Lake St. John, Quebec", and started a taxonomic investigation of the long-eared owls of Canada.

Publications

By A. L. Rand:

"List of Yukon Birds and those of the Canol Road"; Nat. Mus., Canada, Bull. No. 105, Biol. Ser. No. 33, pp. 1-76, 1 fig.

BIRDS

Accessions

- A. E. Bourguignon, Britannia, Ont.: One pectoral sandpiper, one knot, one sanderling.
- L. D. Burling, Ottawa, Ont.: One yellow-bellied sapsucker.
- A. W. Cameron, Amyot Lake, Sask.: Eight birds from Saskatchewan.
- Mr. Chisholm, Westboro, Ont.: One snowy owl.
- M. W. Curtiss, Ottawa, Ont.: One Virginia rail.
- Dr. R. E. DeLury, Ottawa, Ont.: One swift.
- Mr. Endstone, Ottawa, Ont.: One tree swallow.
- H. Fairbairn, Wakefield, Que.: One snowy owl.
- G. E. Findlay, Carleton Place, Ont.: One snowy owl.
- Fred H. Glenny, Blue Sea Lake, Que.: One broad-winged hawk.
- R. W. Hawkins, Ottawa, Ont.: 94 birds from Ontario and Quebec.
- A. L. Wilk (Museum field party): 562 birds, Lake St. John, Quebec.
- Miss E. Hendrick, Lanark, Ont.: One flicker.
- Dr. O. H. Hewitt, Ottawa, Ont.: Two robins, one great black-backed gull.
- A. H. Lang, Entrance, Alberta: One spruce grouse.
- Dr. Douglas Leechman, Ottawa, Ont.: One yellow-bellied sapsucker.
- James Mark, Eastmain, Que.: One eastern meadowlark.
- T. H. Manning, Ottawa, Ont.: 28 birds from Baffin Island, N.W.T.
- Fred MacLennan, Sheldon Lake, Yukon: One horned grebe.
- J. A. Munro, Okanagan Landing, B.C.: One trumpeter swan.
- Mrs. Marion Nixon, Bank End, Sask.: One evening grosbeak.
- G. G. Ommanney, Hudson Heights, Que.: One cowbird (left tarsus).
- Gardener, Museum grounds, Ottawa, Ont.: One wood thrush.
- E. Proulx, Ottawa, Ont.: One pine grosbeak.
- Dr. A. L. Rand, Ottawa, Ont.: Five birds from Ontario.
- K. Stalford, Ottawa, Ont.: One herring gull.
- J. W. Groves, Billings Bridge, Ottawa, Ont.: One horned lark.
- Ronald M. Stewart, Massett, B.C.: One trumpeter swan.
- P. A. Taverner, Ottawa, Ont.: One horned owl.
- H. B. Watkins, near Macleod, Alta.: Seven birds from Alberta.
- Miss B. Weir, Ottawa, Ont.: One goldfinch.



100028

P. A. Taverner

ORNITHOLOGICAL PUBLICATIONS
OF PERCY ALGERNON TAVERNER¹
1895-1945

(Known to be incomplete with respect to newspaper contributions. Mimeo-graphed items have been omitted.)

Compiled by W. L. McAtee

(1895): My Introduction to the Canada Jay and Three-toed Woodpecker. *Oologist*, 12:39-40.
 (The Wheatear at Beaumaris, Muskoka Lake, Ont., Sept. 25, 1894.) *The Museum*, 2:16. Quoted by editor.

(1896): A New Classification. *The Museum*, 2:109-110. Humorous.
 The Village Bird-stuffer. *The Museum*, 2:189-190.
 The Taking of Notes. *Oologist*, 13(5):41-42. (All to this point have the address as Guelph, Ont.)
 (Note on the sharp-tailed grouse, Beaumaris, Ont., Oct. 10, 1896.) *The Museum*, 3:9. Quoted by editor.

(1897): Three Birds of Interest. *The Museum*, 3:39-40. Kiwi, Huia, and Kea.
 Address: Beaumaris, Ont.
 Diary of an Arctic Horned Owl. *The Museum*, 3:150-153. Humorous.
 (Address: Toronto, Ont. All to this point with signature are signed P. A. Tavernier.)

(1904): Another Abnormal Bill. *Auk*, 21:279, 2 figs. Of American Crow. Address: Chicago, Ill.
 A Discussion of the Origin of Migration. *Auk*, 21:322-333. Food supply as a stimulus.
 (Tagging Young Birds.) *Auk*, 21:410. Outline of a bird-banding scheme in Notes and News.
 The Tagging of Birds. *Bull., Mich. Ornith. Club*, 5(2):50-51. Suggests aluminum bands issued by a central record-keeping office—the essentials of the plan followed today. (Address: Detroit, Mich.)
 (Least and Cory's Bitterns in Michigan.) *Bull., Mich. Ornith. Club*, 5(3):68.
 (Ref. supplied by Leon J. Cole.)

(1905): Description of Second Michigan Specimen of Cory's Least Bittern. *Auk*, 22:77-78.
 Notes of Several Rare Southeastern Michigan Birds, with B. H. Swales. *Auk*, 22:88-89.
 Additional Records for Southeastern Michigan. *Auk*, 22:89. Four species at Port Huron, also Purple Gallinule at Guelph, Ont.
 A Hyperlaken Migration Route. *Bull., Mich. Ornith. Club*, 6:3-7. Along the north shore of Lakes Huron and Superior.
 The Origin of Kirtland's Warbler. *Ontario Nat. Sci. Bull. (Guelph)*, 1:13-17.
 Reviewed by Lynds Jones, *Wils. Bull., Old Ser.*, 17, 1905:68.
 Ornithology a Science. *Wils. Bull.*, 17:123-124.
 Priority. *Wils. Bull.*, 17:125-126.
 Bird Casualties. *Wils. Bull.*, 17:131-132.
 Rough Winged Swallow. *Bull., Mich. Ornith. Club*, 6:21. Nesting in Wayne County, Mich.
 (Pine Siskin at Guelph, Ontario.) *Bull. Mich. Ornith. Club*, 6:21. Probably breeding.

¹ Mr. Taverner died May 9, 1947.

(1906): Some More Michigan records. Auk, 13:106-108. (Address: Detroit, Mich.) Lesser Snow Geese in Michigan and Ontario, with B. H. Swales. Auk, 23:219-220.

Tagging Migrants. Auk, 23:232. The flicker return; value of method. Southeastern Michigan Records. Auk, 23:335.

Hudsonian Godwit (*Limosa haemastica*) in Ontario. Auk, 23:335.

The Yellow-breasted Chat. A character sketch. Bird-Lore, 8:131-133. Illustrated with original wash drawing "The Song Flight".

The Yellow-breasted Chat in Michigan. Wils. Bull., 18:17-21.

A Tagged Flicker. Wils. Bull., 18:21-22. Banded in Iowa; shot in Louisiana; the first return from banding scheme; urges more activity in this field.

Remarks on the Summer Birds of Lake Muskoka, Ont., with B. H. Swales. Wils. Bull., 18:60-68.

A Purple Martin Roost. Wils. Bull., 18:87-92. In Chicago. "Republished in Notes from Thicket and Swamp, a nature department in the Guelph, Ontario, Herald."

Trinomials. Ontario Nat. Sci. Bull., 2:16-17. How far to go in splitting is the question.

(1907): (Letter on English Sparrows.) Detroit Journal, May 28. On economic status. Recent Ornithological Developments in Southeastern Michigan, with B. H. Swales. Auk, 24:135-148.

The New Check-list. Condor, 9:55-56. Suggests the providing of names for specific groups and subordination of subspecies.

Identifications. Ont. Nat. Sci. Bull., 3:23-25. Collecting necessary to correct identifications.

The Birds of Point Pelee, with B. H. Swales. Wils. Bull., 19, 1907: 37-54, 82-99, 133-153; 20, 1908: 79-96, 107-129, 1 map. Reviewed by J. A. Allen, Auk, 26, 1909:98-99.

(1908): Four Rare Birds in Southeastern Michigan. Auk, 25:327-328. (Address: Highland Park, Mich.)

Two Ontario Records. Auk, 25:328.

The Year 1908 in Southeastern Michigan. Wils. Bull., 20:199-208. (Address: Highland Park, Mich.)

Wilson's Phalarope and White-rumped Sandpipers in Wayne Co., Mich. Auk, 25:328.

(1909): Two Michigan Records. Auk, 26:83.

(1911): Some Raptorial Migrations in Southern Ontario. Ottawa Naturalist, 25:77-81. Point Pelee records for four species.

A Wood Ibis Record for Michigan. Auk, 28:256.

Notes on the Migration of the Saw-whet Owl. Auk, 28:329-334.

(1912): Two Interesting Records for Canada. Auk, 28:396-397.

Terms used to denote the abundance or rarity of birds. Science, 36:145-147.

On the Collection of Zoological Specimens for the Victoria Memorial Museum. Canada, Dept. of Mines, Geol. Surv., Govt. Printing Bureau, No. 1234, 56 pp. Reviewed by Lynds Jones. Wils. Bull., N.S., 24:204.

Zoological Section. Summary Rept. Geol. Surv., Dept. of Mines (Canada), 1911:374-378. Progress of work and list of specimens received (all phyla).

(1914): A New Subspecies of Dendragapus (*Dendragapus obscurus flemingi*) from Southern Yukon Territory. Auk, 31:385-388. Republished, Canada, Geol. Surv., Mus. Bull. 4, Victoria Memorial Museum, Ottawa.

Geological Survey Museum work on Point Pelee, Ont. Ottawa Naturalist, 28:97-105.

A Label Relief Map for Showing Distribution. Proc. Amer. Assn. of Museums, 8:98. Presented by Harlan I. Smith.

Zoology. Sum. Rept. Geol. Surv., Dept. Mines (Canada), 1912:441-447.

Zoology. Sum. Rept. Geol. Surv., Dept. Mines (Canada), 1913:347-354.

(1915): Recommendations for the creation of three new national parks in Canada. Commission of Conservation (Canada) 6th Ann. Rept., Appendix 3:303-310, 2 pls. The notable bird resorts: Point Pelee, Ont., and Percé Rock and Bonaventure Island, Que.

Zoology. Summary Rept., Geol. Surv., Dept. Mines (Canada), 1914: 152-158. Also issued separately, pp. 1-15. Followed by reports on field expeditions by himself, Francis Harper, R. M. Anderson, and Frits Johansen; and on entomological activities of the Division by C. Gordon Hewitt.

Chaleur Bay Field Work, 1914. Summary Rept., Geol. Surv., Dept. Mines (Canada), 1914:158-159. Miseou Island, Percé, Bonaventure Island, Gaspe; investigation of food habits of the double-crested cormorant.

The Double-crested Cormorant (*Phalacrocorax auritus*) and its Relation to Salmon Industries on the Gulf of St. Lawrence. Canada, Geol. Surv., Mus. Bull. 13, 24 pp., 1 pl., 1 table. Reviewed by Witmer Stone, Auk, 32, 1915:517.

Suggestions for Ornithological Work in Canada. Ottawa Naturalist, 29:14-18, and 21-28.

Prohibition of Game Sale. Letter to Ottawa Citizen, Sept. 15. A necessary conservation measure.

(1916): Faunas of Canada. Canada Year Book, 1915:55-62, six photos; also issued separately, pp. 1-8. Revised several times in later years. Characteristic species of plants, birds, and mammals by life zones.

Zoology. Summary Rept., Geol. Surv., Dept. of Mines (Canada), 1915:249-258. Followed by reports on field work by himself, Charles W. Townsend, and R. M. Anderson; and on entomology by C. Gordon Hewitt. Reviewed by H. S. Swarth in Condor, 20, 1918:141-142.

List of specimens collected by Capt. Jos. Bernard on the Arctic Coast, N.W.T., Canada. Summary Rept., Geol. Surv., Dept. Mines (Canada), 1915: 258-260.

Gulf of St. Lawrence Field Work, 1915. Summary Rept., Geol. Surv., Dept. Mines (Canada), 1915:260-262. Percé and Bonaventure Island and the north shore of the Gulf of St. Lawrence.

(1917): Zoology. Summary Rept., Geol. Surv., Dept. of Mines (Canada), 1916:342-353. Followed by reports on field work by Clyde L. Patch, C. H. Young, R. M. Anderson, and Frits Johansen, and on entomology by C. Gordon Hewitt. Reviewed by H. S. Swarth in Condor, 20, 1918:141-142.

Preliminary list of specimens taken by C. L. Patch, near Barkley Sound, Vancouver Island, between December 16, 1915, and January 1, 1916. Summary Rept., Geol. Surv., Dept. of Mines (Canada), 1916:355-357. 37 species; a few notes.

Preliminary list of specimens taken by C. H. Young and Wm. Spreadborough at Brackendale, Lillooet, and McGillivray Creek, B.C., between June 11 and September 12, 1916. Summary Rept., Geol. Surv., Dept. of Mines (Canada), 1916:359-368. 103 species of birds, with critical comment on many of them.

Preliminary list of specimens taken by C. H. Young near Douglas, Man., between May 22 and June 2, 1916. Summary Rept., Geol. Surv., Dept. of Mines (Canada), 1916:371-374. 33 species, annotated.

Subspecific designations. Correspondence, Auk, 34:370-372. Should not be named merely on geographic probabilities; a vernacular species name is usually enough and such names should be provided in the Check-list; recommends against vernacular subspecific names.

(1918): The Hawks of the Canadian Prairie Provinces in Their Relation to Agriculture. Canada, Geol. Surv., Mus. Bull. 28, Biol. Ser. 7, 18 pp., 4 col. pls., 7 figs. Economically valuable. Review by Witmer Stone, Auk, 36, 1919:132-133, and by H. S. Swarth, Condor, 21, 1919:46.

Some Summer Birds of Alert Bay, B.C. Condor, 20:183-186.

Heermann Gull with White Primary Coverts. Condor, 20:187.

Trinomials and Current Practice. Condor, 20:213-216.

The Gannets of Bonaventure Island. Ottawa Naturalist, 32:21-26, 3 photos.

Instinct Minus Experience. Ottawa Naturalist, 32:36. Comment on imperfect nest of Baltimore oriole.

The Effect of Gopher Poison on Grouse. Ottawa Naturalist, 32:55-56.

(Notice of migration bulletins issued by E. H. Forbush, State Ornithologist of Massachusetts.) Ottawa Naturalist, 32:56.

(Review of) Condor, 20(5), Sept.-Oct., 1918. Ottawa Naturalist, 32:58.

(Review of) Ibis, July 6, 1918. Ottawa Naturalist, 32:58.

(Review of The Auk, July, 1918). Ottawa Naturalist, 32:78.

(Review of In Audubon's Labrador by C. W. Townsend.) Ottawa Naturalist, 32:78.

The Nesting of the Black-crowned Night Heron in Southern Ontario. Ottawa Naturalist, 32:97.

The Birds of Shoal Lake, Man. Ottawa Naturalist, 32:137-144, 1 photo; 157-164, 1918, and Canadian Field-Nat., 33:12-20, 1919.

Addenda to the Birds of Jasper Park, Alta. Canadian Alpine Journal, 9:62-69. That is, additional to J. H. Riley's list in the same publication, 1912:47-75. Reviewed by Witmer Stone, Auk, 36, 1919:132.

Bird-life in Canada. Toronto Globe, Dec. 21. Letter criticizing some popular writings.

(1919): Zoology. Summary Rept., Geol. Surv., Dept. of Mines (Canada), 1917, pt. A, p. 8a. Though unsigned, this 3-paragraph report was undoubtedly prepared by Taverner.

Zoology. Summary Rept., Geol. Surv., Dept. of Mines (Canada), 1918, pt. A, pp. 10-11a. Five paragraphs, unsigned.

Winter Birds of Ontario. Letter to Toronto Globe, Jan. 10. On snowbirds.

The Birds of the Red Deer River, Alta. Auk, 36:1-21, 4 pls.; 248-265, 1 map. (Quoted as to "Fishy flavor" of fish-eating birds by W. L. McAtee.) Auk, 36:100-101.

Characters vs. Geography. Correspondence, Auk, 36:316-317. Geographical origin should not be depended upon in the naming of subspecies; only specimens identifiable by characters should be named.

(Letter of explanation in answer to criticism on above.) Correspondence, Auk, 36:446-448. Specific names preferred over uncertain subspecific designations.

The Summer Birds of Hazelton, B.C. Condor, 21:80-86, one photo.

Some Common Birds of Canada. Colour key to some common Canadian birds. Boy Scout Handbook for Canada, pp. 291-295. Has run through nine editions in which the pagination, but not the text, varies.

An Important Distinction Between Our Two Goldeneyes. Canadian Field-Nat., 33:57-58, four figs.

(Review of) The Game Birds of California, by Joseph Grinnell, H. C. Bryant, and Tracy I. Storer. Canadian Field-Nat., 33:82.

(Review of) The Birds of Middle and North America, Pt. VIII, by Robert Ridgway. Canadian Field-Nat., 33:99.

(Note on the work of Hamilton Laing.) Canadian Field-Nat., 33:99.

(Review of contents of) The Auk for April, 1919. Canadian Field-Nat., 33:100-101.

Bird-houses and Their Occupants. Ottawa Nat., 32:119-126, 3 pls. Republished by the Parks Branch of the Dept. of the Interior in 1920 and other years. Also French editions entitled, Maisons d'oiseaux et leurs Occupants, 14 pp., 3 pls., 1919, 1921. Photo of martin house of original design; plans for other bird boxes and notes on their prospective inhabitants.

Interesting Seasonal Data—In the Migration Bulletin, issued by E. H. Forbush, Ornithologist, to the Commonwealth of Massachusetts, No. 11, dated Nov. 15. Ottawa Nat., 32:131-132. Phenology.

(Review of) The Naturalist's Nest, by R. W. Tufts in The Canadian Boy, 1, 1918; Ottawa Nat., 32:132-133.

(Review of The Auk for October, 1918.) Ottawa Nat., 32:132-133.

(Review of Dwight on Juncos.) Ottawa Nat., 32:133-134.

Re Sight Identifications. Ottawa Nat., 32:134. Cautionary quotations from Wm. Brewster and J. A. Allen, approved by Taverner.

(Review of) In Defence of the Crow, by Norman Criddle. Ottawa Nat., 32:155. The crow can take care of itself.

(Review of The Auk for Jan., 1919.) Ottawa Nat., 32:171-172.

How to Attract Birds to the Home. Canadian Forestry Journal, 15:339-343, three photos.

Birds of Eastern Canada. Memoir 104, Biol. Ser. No. 3, Geol. Surv., Canada, Ottawa, iii + 297 pp., 50 col. pls., 68 figs. Review by Witmer Stone, Auk, 37, 1920:147-149. A second somewhat revised edition was published in 1922. Reviewed by Witmer Stone, Auk, 39, 1922:582. A first French edition was published in 1920, and a second in 1922.

Vanished and Vanishing Birds. Dominion Parks Branch, M.(igratory) B.(ird) L.(eaflet) 5, 8 pp. (4 x 6 $\frac{1}{2}$). A conservation plea; mentions the new system of federal control of migratory species.

Les oiseaux disparus et ceux qui sont à la veille de disparaître. Government print, 8 pp. (4 x 6 $\frac{1}{2}$). French edition of the preceding.

Principles, with R. M. Anderson. On face of permits for scientific bird collecting and forming part of conditions under which they are granted, by the Parks Branch of Dept. of Interior. Same copied and used by State of California.

(1920): James Melville Macoun (Obituary notice). Auk, 37:346.
 (Note to "A fable of today" by Ralf Ranger.) Canadian Field-Nat., 34:14.
 (Review of The Auk for July, 1919.) Canadian Field-Nat., 34:20.
 (Review of) Lead-poisoning in Waterfowl by Alexander Wetmore. Canadian Field-Nat., 34:37.

The Scoters and Eiders. Canadian Field-Nat., 34:41-44, 3 pls., by C. E. Johnson. Diagnostic characters.

(Review of) The Condor, vol. 21, 1919. Canadian Field-Nat., 34:59-60.

The Starling in Canada. Canadian Field-Nat., 34:99.

Accessions to the Museum of the Geological Survey, Canada. Canadian Field-Nat., 34:117. From W. E. Saunders and Ernest T. Seton.

The Name of the "English Sparrow". Canadian Field-Nat., 34:117-118. Comment on the subspecific term *hostilis*.

(Bills of Labrador Duck and American Scoter.) Canadian Field-Nat., 34:155, 3 figs.

Bird-banding taken over by the United States Bureau of Biological Survey. Canadian Field-Nat., 34:158-159.

(Review of) The Auk for 1920. Canadian Field-Nat., 34:176-178.

The Test of the Subspecies. Jour. Mammal., 1:124-127. Intergradation the only proper and workable test.

(1921): Hornby's Petrel. Canadian Field-Nat., 35:18. Review of occurrences in Canada.

(Review of) The Auk (Nos. 3 and 4) 1920. Canadian Field-Nat., 35:36-40. Not signed; much comment on vernacular names of birds.

The Evening Grosbeak in Canada. Canadian Field-Nat., 35:41-45.

Swarth on the Fox Sparrow. Canadian Field-Nat., 35:76-78. "A Species Splitter at his Best, and Worst." Noticed in Auk, 39, 1922:140.

Lessons Learned from a Tame Sparrow Hawk. Canadian Field-Nat., 35:135-140, 1 photo, 1 fig.

(1922): A correction: Brewer's Blackbird not occurring in northern British Columbia. Condor, 24:31. Re-identified as Rusty Blackbird.

Crossbills Eating Aphid. Condor, 24:96.

(Review of The Condor for 1921.) Canadian Field-Nat., 36:52-54.

(Review of Territory in Bird-life, by H. E. Howard.) Canadian Field-Nat., 36:55-56.

An Aquatic Habit of the Great Blue Heron. Canadian Field-Nat., 36:59-60. Alighting on deep water.

The Disappearance and Recovery of the Eastern Bluebird. Canadian Field-Nat., 36:71-72. History plus philosophy.

(Review of The Auk for 1921.) Canadian Field-Nat., 36:76-80.

Adventures with the Canada Goose. Canadian Field-Nat., 36:81-83, one photo.

(Review of) Check-list of Birds of Illinois. Canadian Field-Nat., 36:179-180. Unfavourable; the compiler was Benjamin T. Gault.

The Starling in Canada. Letter to Ottawa Citizen, May 1.

(1923): Generic Subdivision (and) The Genus Debased. (A round-robin of protest.) Auk, 40:177-180. Signed by 14 American naturalists.

The Alice-Thrush—a correction. Condor, 25:111. Is *Hylocichla ustulata*.

(Review of The Birds of the Stikine River Region, B.C., by H. S. Swarth.) Canadian Field-Nat., 37:32-35.

(Review of The Auk for 1922.) Canadian Field-Nat., 37:36-40, 57-60.

Magpies and Stock. Canadian Field-Nat., 37:77. Record of their pecking galled horses traced back to 1806-1807 (Zebulon Pike).

(Review of the British birds marking scheme.) Canadian Field-Nat., 37:120.

Circumventing the House Sparrow. Canadian Field-Nat., 37:137-138.

Canada's Song Birds. Letter to Ottawa *Citizen*, Feb. 5. Appreciation of bird songs a matter of association.

(1924): (Review of) The Condor, 1922. Canadian Field-Nat., 38:19-20, 39-40.

Two Interesting Nests. Canadian Field-Nat., 38:94, 1 fig. of Hummingbird and Winter Wren.

(Note to letter on song of Crossbill, calling attention to the fact that bird songs are not "music" in the musician's sense of the word.) Canadian Field-Nat., 38:140.

(1925): (Review of papers on Birds of Kent county, Ont., by G. T. McKeough and J. H. Smith.) Canadian Field-Nat., 39:46-47. Unfavourable.

(Review of) The Auk, 1923. Canadian Field-Nat., 39:26-28, 47-48.

(Review of) The Auk, 1924. Canadian Field-Nat., 39:66-68, 88-90, 123-124.

Some other publications. Canadian Field-Nat., 39:124. Notices of bird articles in The Oologist's *Record* and in Natural History.

(Note on field work on Red Deer River, Alta., in summer of 1925.) Canadian Field-Nat., 39:152. A news item.

(1926): The meeting of the American Ornithologists' Union. Canadian Field-Nat., 40:17. New York, Nov. 1925.

Scientific Advice for Wild Life Conservationists. Canadian Field-Nat., 40:105-106.

(Review of Birds of British Columbia by Allan Brooks and Harry S. Swarth.) Canadian Field-Nat., 40:116-117.

(Announcement of field work 1926, northwest of Edmonton, Alta.) Canadian Field-Nat., 40:139. A news item.

The Tempest in the Teapot. Canadian Field-Nat., 40:141. Townsend's vs. Audubon's Labrador.

Note to report of female Redstart singing at Hamilton. Canadian Field-Nat., 40:142. Probably a young male.

Birds of Western Canada. Bulletin No. 41, Biol. Ser. No. 10, Victoria Memorial Museum, Ottawa, 380 pp., 84 col. pls., 315 figs. Review by Witmer Stone, Auk, 44, 1927:125-127, and by H. S. Swarth, Condor, 29, 1927:84-85. A revised edition was issued in 1928.

(1927): (Comments upon De Mille's Birds of Gaspe county, Que.) Auk, 44:154-155. Critical review.

Some Recent Canadian Records. Auk, 44:217-228. Notes on 48 species.

Opinions on National Bird. Toronto *Globe*, May 12.

The Bean Goose (*Anser fabalis*) in Canada. Auk, 44:558-559. But see, "That Alberta Goose", 1930.

Hungarian Partridge vs. Sharp-tailed Grouse. Canadian Field-Nat., 41:147-149. Known food competitor and possible disease carrier.

(Obituary note—L. A. Fuertes.) Canadian Field-Nat., 41:155.

(Notice of fifty winter birds of northeastern United States.) Canadian Field-Nat., 41:156. Pictures by Allan Brooks in card form by National Association of Audubon Societies.

A Study of *Buteo borealis*, the Red-tailed Hawk, and Its Varieties in Canada. Mus. Bull. 48, Biol. Ser. 13, Nat. Mus., Canada, 21 pp., 3 col. pls., 1 map. Review by Witmer Stone, Auk, 45, 1928:244-245, and by H. S. Swarth, Condor, 30, 1928:197-199.

(Letter on subspecific identifications by oologists.) Oologists' *Record* (London), 7:38-39.

(1928): Cory's Least Bittern. *Auk*, 45:204-205. Deems it a good species.
 Bears and Hawks. *Condor*, 30:157. Apparently bears rob hawk nests.
 (Note on Bronzed Grackle catching goldfish in garden pool.) *Canadian Field-Nat.*, 42:44-45.
 Townsend's Warbler, a Correction. *Canadian Field-Nat.*, 42:127. Was *Dendroica virens*, juv.
 Cliff Swallow Nests and Rain. *Canadian Field-Nat.*, 42:148-149. Built on sites sheltered from rain.
 (Review of General Ornithology Laboratory Notebook by A. A. Allen, *et al.*) *Canadian Field-Nat.*, 42:182-183.
 (Review of a List of New Brunswick birds by W. H. Moore.) *Canadian Field-Nat.*, 42:183-184. Unfavourable.
 Ornithological investigations near Belvedere, Alberta, 1926. *Ann. Rept., Nat. Mus. of Canada*, 1926 (1928): 84-104. Review by Witmer Stone, *Auk*, 46, 1929:262-263.

(1929): A Study of the Canadian Races of the Rock Ptarmigan (*Lagopus rupestris*). *Ann. Rept., Nat. Mus., Canada*, 1928:28-38, 1 map, 11 tables.
 The Summer Moult of the Razor-billed Auk (*Alca torda*). *Auk*, 46:223-224.
 The European Coot in America. *Auk*, 46:227. A Newfoundland record.
 The Red Plumage Coloration of the Little Brown and Sandhill Cranes, *Grus canadensis* and *Grus mexicanus*. *Auk*, 46:228-230. Due to ferric oxide from water.
 A Lapwing from the Canadian Labrador. *Auk*, 46:231.
 Bird notes from the Canadian Labrador, 1928. *Canadian Field-Nat.*, 43:74-79.
 Random notes on the fluctuation in numbers of rodents and grouse in Canada. *Canadian Field-Nat.*, 43:162-164.
 (Critical notes to birds of the Mount Logan Expedition of 1925.) *Ann. Rept., Nat. Mus., Canada*, for 1927(1929):72-95. Review by Witmer Stone, *Auk*, 47, 1930:115.

(1930): That Alberta Bean Goose—a Correction. *Auk*, 47:243-244. Withdraws the 1927 record.
 Canadian Bird Postal Cards. Issued by the Nat. Mus., Canada. Text.
 Some Zoological Aspects of the Canadian Arctic Expedition of 1929. *Canadian Field-Nat.*, 44:25-27, 1 pl.
 (Review of) The Natural History of the Double-crested Cormorant, by H. F. Lewis. *Canadian Field-Nat.*, 44:51.
 Some Canadian Birds. *Canadian Geog., Jour.*, 1(1), May, pp. 31-32, 17 col. pls.
 Notes on a selection of four-colour plates by Allan Brooks in Taverner's books on the birds of eastern and western Canada.

(1931): An Albino *Empidonax*. *Auk*, 48:603-604.
 A Study of *Branta canadensis* (Linnaeus) the Canada Goose. *Ann. Rept., Nat. Mus., Canada*, for 1929:30-40, 1 pl., 1 fig., 5 tables.

(1932): A New Subspecies of Willow Ptarmigan from the Arctic Islands of America. *Lagopus lagopus leucopterus*, subsp. nov. (the Whiteshafted Ptarmigan). *Ann. Rept., Nat. Mus., Canada*, for 1930(1932):87-88.
 A New Hybrid Grouse *Lagopus lagopus* (Linnaeus) \times *Canachites canadensis* (Linnaeus). *Ann. Rept., Nat. Mus., Canada*, for 1930(1932):89, Pl. 1.
 (Review of) Check-list of North American Birds, 4th edition, 1931. *Canadian Field-Nat.*, 46:23-25.
 (Answers to inquiries *re* disappearance of male Hummingbirds and Robins in autumn, also Eagles tearing nests to pieces.) *Canadian Field-Nat.*, 46: 169-170.
 (Review of) Attune with Spring in Acadie by Claire H. MacIntosh. *Canadian Field-Nat.* 46:194. Contains bird lists and poems.
 The Last of the Heath Hens. *Canadian Field-Nat.*, 46:207-208.
 A partial study of the Canadian Savanna sparrows, with description of *Passerculus sandwichensis campestris*, subsp. nov., the Prairie Savannah Sparrow. *Proc. Biol. Soc., Washington*, 45:201-205.

(1933): Purple Martin Gathering Leaves. *Auk*, 50:110-111.
 (Review of The Hawks and Owls of Ontario by L. L. Snyder.) Canadian Field-Nat., 47:37-38.

William Spreadborough, Collector, 1856-1931. Canadian Field-Nat., 47:39-41, 1 pl. (portrait).

(Review of Bird Watching in the West by F. S. Twining.) Canadian Field-Nat., 47:60.

(Review of An Introduction to the Study of Birds in British Columbia by J. A. Munro.) Canadian Field-Nat., 47:61-62.

(Review of a Faunal Investigation of Long Point and Vicinity, Norfolk county, Ont., by L. L. Snyder.) Canadian Field-Nat., 47:77.

A Study of Kumlien's Gull (*Larus kumlieni* Brewster). Canadian Field-Nat., 47:88-90.

(Review of The Birds of Minnesota by T. S. Roberts.) Canadian Field-Nat., 47:96-98.

(Comment on discussion *re* vernacular nomenclature.) Canadian Field-Nat., 47:116. Christmas bird lists should be in terms of species, not subspecies.

(Note to article on supposed Blue Grosbeak at Chatham, Ont., by E. H. Dory.) Canadian Field-Nat., 47:121.

Waifs on Shipboard at Sea. Canadian Field-Nat., 47:140.

(Review of Birds of the Battle River region of Central Alberta by Frank L. Farley.) Canadian Field-Nat., 47:159.

In the Footsteps of its Ancestors. Bird-Lore, 35:205. Photograph, with legend, of dinosaur footprint bird-bath on National Museum of Canada grounds.

(1934): The Madeira Petrel in Ontario. *Auk*, 51:77.

Flicker Hybrids. *Condor*, 36:34-35.

The Madeira Petrel, *Oceanodroma castro*—a New Bird for Canada. Canadian Field-Nat., 48:20-21.

White Herons in Southern Ontario. Canadian Field-Nat., 48:39.

The Birds of Churchill, Manitoba, with G. M. Sutton. Annals of the Carnegie Museum, 23:1-83, 13 pls. (1 col.), 1 map. Review by Witmer Stone, *Auk*, 51, 1934:544-545.

Birds of the Eastern Arctic in "Canada's Eastern Arctic". Dept. of the Interior, Ottawa, pp. 113-128, 6 photos, 1 map. Review by G. M. Allen, *Auk*, 54, 1937:569.

An Escaped Red-breasted Goose, *Bernicla ruficollis*, from James Bay. Canadian Field-Nat., 48:103. From Kellogg Bird Sanctuary, Michigan.

(Review of A History and List of Birds of Middlesex county, Ont., by W. E. Saunders and E. M. S. Dale.) Canadian Field-Nat., 48:136.

Birds of Canada. Nat. Mus., Canada, Bull. 72, Biol. Ser. 19, Ottawa, 445 pp., 87 col. pls., 488 figs. Review by Witmer Stone, *Auk*, 52, 1935:333, and by Joseph Grinnell, *Condor*, 37, 1935:179-180; portrait of Taverner, p. 180.

(Vernacular specific names.) Correspondence, *Auk*, 51:279-280. A system of English names for all our species and subspecies is needed.

(1935): Vernacular names again. *Condor*, 37:85-86. More important to have names for species than for subspecies.

(Review of) The Hawks of North America by John Bichard May. Forest and Outdoors, 31(6), July, pp. 933-934. Highly favourable.

(Review of a Field Guide to the Birds by Roger Tory Peterson.) Canadian Field-Nat., 49:62.

(Review of Some Common Birds of Nova Scotia by Robie Tufts.) Canadian Field-Nat., 49:89.

(Review of American Bird Biographies by A. A. Allen.) Canadian Field-Nat., 49:109-110.

(Review of A Guide to Bird Songs by Aretas Saunders.) Canadian Field-Nat., 49:125-126.

(Review of The Hawks of North America, Their Field Identifications and Feeding by John Bichard May.) Canadian Field-Nat., 49:126.

Our Birds of Prey. Forest and Outdoors, 31(8), Sept., pp. 987 and 1000-1001, 1 fig. (the nighthawk!). Mostly on food habits.

Avian Murder. Canadian Field-Nat., 49:116-118. Mostly by gulls.
 Regarding Dowitchers. Murrelet, 16:15. Inclined to accept the subspecies
Limnodromus griseus hendersoni Rowan.
 Continental Land Masses and Their Effect upon Bird Life. Condor, 37:160-
 162, 2 maps. Lesser size of winter range a limiting factor.
 Variability in Size of Gulls. Condor, 37:215-216. Probably due to food
 supply.

(1936): (Review of The Passenger Pigeon in Ontario by Margaret H. Mitchell.)
 Canadian Field-Nat., 50:69.
 (Review of four papers from the Royal Ontario Museum of Zoology, Toronto.)
 Canadian Field-Nat., 50:70.
 Bird notes from Grand Manan, N.B. Canadian Field-Nat., 50:142.
 Injury Feigning by Birds. Correspondence, Auk, 53:366.
 Taxonomic comments on Red-tailed Hawks. Condor, 38:66-71, 1 map. Dis-
 cussion and key. Review by Witmer Stone, Auk, 53; 1936:360.
 The Fundamentals of the Duck Situation, 1936. Proc. North Amer. Wildlife
 Conference, Senate Committee Print, 74th Congress, 2nd session, Wash-
 ington, D.C., pp. 523-525. Less shooting a necessity.
 A letter to the author. In "From Humming Bird to Eagle" by William
 Perkins Bull, Toronto, p. 21. In praise of local lists. A number of
 Taverner's drawings are reproduced in this work.

(1937): Bird Populations, Past and Present, a Personal Experience. Bird-Lore,
 39:289-292. Have decreased; speculation as to causes.
 Birds vs. Poison Sprays. Auk, 54:200.
 (Review of Fluctuations in Numbers of Ruffed Grouse by C. H. D. Clarke.)
 Canadian Field-Nat., 51:61-62.
 (Review of Field Notes, vol. I, Oct. 1936. Mimeographed Quarterly of Junior
 Field Naturalists Association of British Columbia.) Canadian Field-
 Nat., 51:62.
 (Review of The Distribution of Breeding Birds in Ontario, Part 1, by
 J. L. Baillie and P. Harrington.) Canadian Field-Nat., 51:62.
 Ornithological Division. Ann. Rept., Nat. Mus., Canada, 1936-37:21-24.

(1938): Birds of Canada. 8vo., 445 pp., 173 col. pls., 488 black and white illus.,
 Musson Book Co., Toronto. A photographic copy of original edition.
 Review by G. M. Allen, Auk, 56, 1939:487-488.
 (Review of The Chat. A tri-monthly journal of the Toronto Ornithological
 Field-Group (mimeographed)), vol. 2, No. 1. Canadian Field-Nat.,
 52:110.
 An Explanation of the Local Variations Occurring in the Great Horned Owls.
 Nebraska Bird Review, 6:8-9. Vagrant birds breeding outside their usual
 subspecific range.
 Adventures in Bird Photography. Canadian Geog. Jour., 16:264-283, 24
 photos. A series of bird photographs with explanatory notes. Intro-
 duction by Hoyes Lloyd.
 Ornithological Division. Ann. Rept., Nat. Mus., Canada, 1937-38:17-20.

(1939): (Review of Log Book of Minnesota bird-life by T. S. Roberts.) Canadian
 Field-Nat., 53:13.
 (Review of The Birds of Algonquin Provincial Park, Ont., by D. A.
 MacLulich.) Canadian Field-Nat., 53:13.
 (Review of A Faunal Investigation of western Rainy River District, Ont., by
 L. L. Snyder.) Canadian Field-Nat., 53:13.
 (Review of The Northwest Coast Sharp-shinned Hawk by L. L. Snyder.)
 Canadian Field-Nat., 53:13-14.
 (Review of A Predator Relationship between the Short-eared Owl and the
 Meadow Mouse by L. L. Snyder and C. E. Hope.) Canadian Field-Nat.,
 53:14.
 Canadian Water Birds, Game Birds, Birds of Prey. A pocket field guide.
 The Musson Book Company, Toronto, 293 pp., nearly 100 col. pls., many
 drawings. Small octavo.
 Canadian Land Birds. A pocket field guide. The Musson Book Company,
 Toronto, 279 pp., 113 col. pls., many drawings. Small octavo.

The Red-winged Blackbirds of the Canadian Prairie Provinces. *Condor*, 41:244-246, 3 graphs. Suggests dropping the subspecies *Agelaius phoeniceus arctolegus*.

The Role of the Predator. *Canadian Field-Nat.*, 53:88-90. Has an essential place in the scheme of nature.

(Editorial note on The Northern Distribution and Status of the English Sparrow in Canada by Richard Lee Weaver.) *Canadian Field-Nat.*, 53:99. Ornithological Division. *Ann. Rept., Nat. Mus., Canada*, 1938-39:20-23.

(1940): Birds of Canada. Second Musson Edition, Toronto. With minor corrections and alterations. See under 1938.

Birds in Canada's National Parks. *Canadian Geog. Jour.*, 20, May 1940:240-255. A copiously illustrated article with photographs of birds in life from various sources, some by the author. Introduction and running comments on the pictures.

Predators—Human and Wild. *Bird-Lore*, 42:4-9, 3 pls. Predators have a sanitary rôle and control of them should be limited to what is justifiable and necessary.

Fieldfare, an addition to the American list, and some Arctic notes. *Auk*, 57:119.

Ivory Gulls in the Gulf of St. Lawrence. *Auk*, 57:402-403.

Mourning Dove in Newfoundland. *Auk*, 57:415.

Canadian Status of the Long-tailed Chickadee. *Auk*, 57:536-541, 2 figs.

Variation in the American Goshawk, including description of *Astur atricapillus laingi*, subsp. nov. *Condor*, 42:157-160.

The Distribution of the Western Solitary Sandpiper. *Condor*, 42:215-217, 1 graph, 1 map.

(Review of On *Melospiza melodia* in Ontario by J. H. Fleming and L. L. Snyder.) *Canadian Field-Nat.*, 54:78.

The Ruffed Grouse and Island Populations. Note appended to a report of the bird's introduction on Grand Manan. *Canadian Field-Nat.*, 54:90.

The Nesting of Ross's Goose, *Chen rossi*. *Canadian Field-Nat.*, 54:127-130.

(1941): Breeding Grounds of Ross's Goose at last discovered. *Auk*, 58:92.

Scissor-tailed Flycatcher in Quebec. *Auk*, 58:97-98.

(Review of A Field Key to our Common Birds by Irene T. Rorimer.) *Canadian Field-Nat.*, 55:8.

The Scarlet Ibis and Other Puzzling Records. *Canadian Field-Nat.*, 55:13-14. Possibly escaped birds.

(Review of Wings at my Window by Ada Chapman Govan.) *Canadian Field-Nat.*, 55:62.

James Henry Fleming, 1872-1940. An appreciation. *Canadian Field-Nat.*, 55:63-64, 1 pl. (portrait).

Another Scissor-tailed Flycatcher in Quebec. *Canadian Field-Nat.*, 55:77-78. Review of Canadian records.

(Review of Breeding Birds of Thunder Bay, Lake Superior, Ontario, by L. S. Dear.) *Canadian Field-Nat.*, 55:139.

(1942): The Distribution and Migration of the Hudsonian Curlew. *Wils. Bull.* 54:3-11, 1 photo, 1 map.

Canadian Races of the Great Horned Owls. *Auk*, 59:234-245.

The Sense of Smell in Birds. Correspondence, *Auk*, 59:462-463.

Woodpecker Efficiency. *Condor*, 44:36.

(Letter of retirement.) *Canadian Field-Nat.*, 56:126. After 32 years of service as Ornithologist of the National Museum of Canada.

(1943): Do Fishes Prey upon Sea Birds? *Ibis (London)*, 85:347. Instances of aquatic vertebrates preying on birds.

Ornithological Division. *Rept. Mines and Geology Branch, Canada, Dept. of Mines and Resources*. 1942:24-25. The reports for years 1938-41 contain brief references to work of the Ornithological Division, which doubtless were furnished by Taverner, but they seem hardly worth including in this bibliography. The present entry differs from the others in being longer and including a list of specimens received.

Subspecific Values. Correspondence, Auk, 60:306-307. Intraspecific varieties of differing distinctness exist but all do not require recognition in nomenclature.

(1944): Memories of William Edwin Saunders, 1861-1943. Auk, 61:345-351, Pl. 3 (portrait).

(1945): A New Deal for the Museum. Ottawa Citizen, Feb. 26.

In press. Correspondence entitled "A speculative discussion of the factors that may prevent the persistence of hybrid strains" remains to be published in *The Auk*.

NATIONAL HERBARIUM

A. E. Porsild, Chief Botanist, continued the preparation of his monograph on the flora of southeastern Yukon. Also he prepared for publication a revision of the genus *Dryas* in North America. A botanical survey of Banff National Park begun in 1945 was continued from June 18 to Sept. 6, 1946. This season's work resulted in a collection of 6,000 plant specimens, numerous ecological and taxonomical notes, and colour photographs.

He did library and herbarium research at Harvard University, Cambridge, Mass., in the period December 21 to January 5. On May 10 and 11 he attended meetings of the Arctic Institute of North America in Montreal, and from May 20 to 22 annual meetings of the Royal Society of Canada, of which he was made a Fellow. The annual meeting in Boston of the American Association for the Advancement of Science was attended from December 25 to December 30. On July 1, in recognition of special services during the war, he was awarded the M.B.E.

During the year, 277 requests for technical information were dealt with by correspondence. Visitors from Canada and elsewhere who consulted the collections in the herbarium for special information, totalled 81.

Herbarium specimens received by exchange totalled 5,089, and by donation 1,038; 1,570 specimens were lent to, and 287 borrowed from, other herbaria; 3,232 duplicate specimens were labelled and arranged into sets for distribution in continuation of exchanges; and a total of about 5,000 plants were named.

B. Boivin, Assistant Botanist, who was appointed on May 9, indexed botanical reprints that had accumulated over a period of years and edited and prepared for publication statistical data on public and private Canadian herbaria. From June 18 to September 6, he accompanied A. E. Porsild in the field.

Miss H. T. Harkness, Technician, mounted and inserted 4,636 herbarium specimens bringing the total number of filed specimens in the National Herbarium to 181,266. She filed four issues of the Gray Herbarium Index and mounted 488 botanical slides.

In March the Herbarium moved to new quarters on the fourth floor in the Museum building.

Notable accessions by exchange include Nos. 1001-2081 "*Plantae Finlandiae Exsiccatae*" of which Nos. 1-1000 had previously been received; and Century xiv of the splendid "*Plantae Exsiccatae Grayanae*"; notable accessions from private sources include a gift of 226 plants from W. H. Bryenton of Edmonton, Alta., collected in northern Manitoba.

Lectures

By A. E. Porsild:

Journey to Moscow; McGill University, April 2, 1946.

Flora of Canada; Nat. Mus., Canada, Feb. 15, 1947.

Plant Collecting in Rocky Mountains; Sedbergh School, Montebello, Que., Feb. 15, 1947.

Journey to Moscow; Y.M.C.A., Ottawa, March 7, 1947.

Publications

By A. E. Porsild:

"Journey through Siberia to Moscow"; spec. mimeographed publication, October 1946, pp. 1-60.

"A Scientist goes to Moscow"; Canadian Geographical Journal, May 1946, pp. 197-213.

PLANTS

Accessions

Gifts:

- A. J. Breitung, Ottawa: 16 plants from Saskatchewan.
- W. H. Bryenton, Edmonton: 226 plants from northern Manitoba.
- C. E. Garton, Port Arthur, Ont.: 221 plants from Lake Superior, Ont.
- C. Heimburger, Toronto, Ont.: 50 miscellaneous woody plants.
- Rev. Father LeGallo, St. Pierre and Miquelon: 14 plants from St. Pierre.
- Rev. Father E. LePage, Rimouski, Que.: 291 plants from James Bay.
- H. Lloyd, Ottawa: miscellaneous plants from Ontario, 97.
- C. L. Patch, Ottawa, Ont.: 1 plant.
- A. E. Porsild, and A. J. Breitung, staff: 6,000 plants from Banff National Park.
- R. T. Porsild, Whitehorse, Y.T.: 20 Yukon plants.
- Dr. George H. Turner, Fort Saskatchewan: 68 plants of Alberta.

By Exchange:

- J. F. Brenckle, Mellette, S. Dakota: 43 *Polygonum*.
- W. Eyerdam, Seattle, Wash.: 176 plants from Alaska.
- Gray Herbarium, Harvard University: 243 *Exsiccatae Grayanae* and plants from Alaska.
- Helsinki Botanical Museum, Univ. of Helsinki, Finland: 1,081 *Pl. Finlandiae Exsiccatae*.
- Iowa State College, Ames, Iowa (J. P. Anderson): 254 plants from Yukon and Alaska.
- New York Botanical Garden, Bronx Park, New York: 388 miscellaneous plants from Nevada.
- National Museum, Stockholm, Sweden: 1,621 Scandinavian plants.
- Oka Agricultural College, Oka, Que. (Rev. Father Louis Marie): 254 plants.
- U.S. National Herbarium, Washington, D.C.: 380 miscellaneous plants.
- University of Washington, Seattle, Wash.: 696 Rocky Mountain plants.

EDUCATIONAL WORK

The educational function of the National Museum is becoming increasingly recognized, and its educational activities were maintained at a high level in spite of the handicaps of the immediate post-war year. The members of the staff have shown their keen appreciation of the educational services, and every effort was made to permit students and others to make full use of the material in such sections of the exhibition halls as have been open to the public. Steps were taken toward the reorganizing of those halls that have been closed to the public during the war years to provide essential office space. Temporary occupants of the fourth floor were moved to other quarters, allowing the exhibition halls to be vacated, and the work of preparing for their eventual reopening was begun.

Special educational exhibits were arranged by the scientific staff for organized study groups, one of which had an attendance of 6,200.

The exhibition halls were visited by 154,531 persons, including teachers, students, and other visitors. Other Museum activities were attended by 42,678 persons, making a total attendance of 197,209.

As formerly, a great deal of Museum material on anthropology, biology, and other phases of the natural history of Canada went to teachers, students, and other persons in all parts of Canada. Visual aids have become a regular part of the teaching system, and authentic information on these subjects was provided by means of motion pictures and lantern slides, which were lent to Canadian educational institutions and other museums free of charge, except for cost of transportation one way. Replacements were made of those 16 mm. prints in the film loan library that were too worn for further use, and 7 new films were added to the Museum library. Museum slides and films were seen by 67,323 persons. If records of attendance were supplied by all borrowers, this number would be much greater.

The photographic library contains a large collection of photographs on such subjects as geology, palaeontology, physiography and topography, natural history, Indian and Eskimo life, taken by officers of the National Museum and Geological Survey. Selections were made from this collection to meet the large number of requests for photographs to illustrate scientific journals, textbooks, and magazine and newspaper articles published in Canada, England, and the United States. Much time was given also by the staff to the identification of specimens and to the lending of natural history specimens.

GEOLOGY AND MINERALOGY (Geological Survey)

The mineral exhibit has been arranged on the mezzanine in 21 separate cases, each designed to illustrate some particular feature, such as: what minerals are, how they occur, their crystal forms, colours, physical properties, chemical composition, and economic value. Collections of mineral and rock specimens, available for distribution to the public for educational purposes, are also on display in this exhibit. Again, this year, there was an increase in the number of requests received from the western provinces for specimens and collections of minerals and rocks, especially those available as prospector's sets. In all 1,625 mineral and rock collections comprising 56,905 specimens were prepared and distributed to the public during the fiscal year.

PALÆONTOLOGY (Geological Survey)

Lack of exhibition space does not permit a complete exhibit of fossil specimens. In the Vertebrate Hall western Canada is represented by dinosaurs and other vertebrate remains; central Canada mainly by fish remains; and the Maritime section by a fossil forest from the coal fields.

NATIONAL MUSEUM LECTURES

This year the National Museum presented its 35th anniversary series of children's lectures, and its 25th anniversary series of adult lectures. Thirty-five years ago a small group of children gathered on the top floor of the National Museum to hear the first Museum lecture to be given in Canada. Out of these Saturday morning lectures grew the Wednesday evening series for adults, and two series, which continue to grow in

popularity and to attract capacity audiences, are organized by a committee composed of: M. E. Wilson, Chairman, C. L. Patch, M. F. Goudge, F. J. Alcock, Marius Barbeau, and Miss M. Godwin, Secretary. On the anniversary series twenty-eight programs were given to the Saturday morning children's audiences and thirteen to the Wednesday evening adult audiences. This year a special series was arranged, designed to appeal especially to the junior audiences, with a resultant sustained increase in interest and attendance.

The program of the 1946-47 series follows:

Wednesday evening series for adults:

- Giants of the Past. By C. M. Sternberg, Geological Survey, Department of Mines and Resources, Ottawa.
- Britain Today. By Sir Alexander Clutterbuck, K.C.M.G., M.C., High Commissioner, United Kingdom and Northern Ireland, Ottawa.
- Java-Bali Report (Motion Picture) Program. Introduced by A. L. Rand, Ph.D., Nat. Mus., Canada, Ottawa.
- Food from Afar. By W. H. Cook, Ph.D., National Research Council, Ottawa.
- Europe's First Civic Centre. By Professor Homer A. Thompson, Department of Art and Archaeology, University of Toronto, Toronto, Ont.
- Dark Rapture (Motion Picture).
- Quebec. Yesterday and Today. By J. M. Humphrey, Travelogue-Lecturer, Vancouver.
- Away down South in Canada. By F. C. Nunnick, Director, Publicity and Extension Division, Dept. of Agriculture, Ottawa.
- The Grand Canyon of the Colorado. By F. J. Alcock, Ph.D., Geological Survey, Dept. of Mines and Resources, Ottawa.
- The Beginning of History. By James A. Gibson, Dept. of External Affairs, Ottawa.
- Montreal Botanical Garden. By Jacques Rousseau, Ph.D., Director, Montreal Botanical Garden, Montreal.
- Glimpses of India Today. By T. L. Tanton, Ph.D., Geological Survey, Dept. of Mines and Resources, Ottawa.
- British West Africa. By Sir Andrew Jones, C.M.G., United Kingdom Food Mission, Ottawa.

The Saturday morning series for children:

- Africa Speaks (Motion Picture).
- Giants of the Past. By C. M. Sternberg, Geological Survey, Dept. of Mines and Resources, Ottawa.
- Itchy Scratchy, etc. (Motion Pictures).
- Adventures with Bird Clubs in Winter. By Dr. O. H. Hewitt, National Parks Bureau, Ottawa.
- How to be Kind to your Pets. By Dr. R. C. S. Radmore, Ottawa.
- Realm of the Wild, etc. (Motion Pictures).
- A Visit to Eskimo Land. By Dr. Douglas Leechman, Nat. Mus., Canada.
- Around the World through the South Seas. By Alan Ewart, Ottawa.
- The Grand Canyon of the Colorado. By Dr. F. J. Alcock, Geological Survey, Dept. of Mines and Resources, Ottawa.
- Track! Track! (Motion Pictures).
- Tracking Animals. By F. C. Zufeldt, Ottawa Public Schools, Ottawa.
- A Visit to India. By T. L. Tanton, Ph.D., Geological Survey, Dept. of Mines and Resources, Ottawa.
- Treasure Island, etc. (Motion Pictures).
- The Bear and its Relatives. By Dr. A. L. Rand, Nat. Mus., Canada, Ottawa.

The total attendance at all the lectures and motion picture programs was 15,200 school children, and 7,600 adults.

Members of the Canadian Boy Scouts Association (Ottawa Branch), acted as ushers, along with the Sea Cadets. Their co-operation and that of the Royal Canadian Mounted Police is appreciated.

Particular acknowledgment is made of the co-operation of the National Film Board and the National Film Society for assistance in obtaining suitable motion pictures, and of the local newspapers for reports of the various lectures, as well as the Ottawa Public Library in selecting and providing lists of books related to lecture subjects on Museum programs. Copies of these lists were made available at the Museum to all who were interested in supplementary reading. Thanks are due to the United States National Park Service for the loan of lantern slides.

LECTURE HALL

The Lecture Hall was made available to scientific, educational, and government organizations, and 137 reservations were made during the year. The Hall has a seating capacity of 598 and has equipment for showing sound and silent 35 mm. and 16 mm. films, and lantern slides. There was a total attendance of 42,678 at all these meetings, and approximately 400,000 feet of film and 1,995 lantern slides were shown.

